DOCUMENT RESUME

ED 134 246 JC 770 085

AUTHOR Weaver, Thomas L.
TITLE Feasibility of Change: A Comparative Study of Educational Policies Affecting Flexibility in the Transfer Degree's General Education Requirements.
PUB DATE 31 Dec 76
NOTE 84p.; Ed.D. Practicum, Nova University

EDRS PRICE MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS Articulation (Program); Associate Degrees; Community Colleges; Comparative Analysis; *Degree Requirements; *Educational Policy; *Elective Subjects; *General Education; Higher Education; *Junior Colleges; State Universities
IDENTIFIERS Florida

ABSTRACT

The general education requirements of 27 public community colleges and 9 state universities in Florida, as determined through a review of those institutions' catalogs, were compared with the general education requirements of Central Florida Community College (CFCC). Results showed CFCC's 39-hour requirement in general education to be more demanding than the general education requirements of the majority (78.5%) of community colleges and the majority (67%) of state universities. CFCC's nine-hour requirement in each of the areas of communications, humanities, and science was more demanding than the requirements of both community colleges and state universities. Its nine-hour requirement in social sciences was more demanding than the requirement of the majority of universities. CFCC's policy allowed no flexibility for electives in comparison to the majority of universities and 36% of the community colleges which made such provision. It was recommended that CFCC reduce from 39 to 36 the semester hours required for general education, and reduce from 9 to 6 the semester hours required in the areas of communications, humanities, social science, and science in order that students might take free electives congruent with the needs of their major programs. (Author/JDS)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED134246

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

FEASIBILITY OF CHANGE: A COMPARATIVE STUDY OF EDUCATIONAL POLICIES AFFECTING FLEXIBILITY IN THE TRANSFER DEGREE'S GENERAL EDUCATION REQUIREMENTS

by

Thomas L. Weaver, M.Ed.

Central Florida Community College

A PRACTICUM PRESENTED TO NOVA UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF EDUCATION

NOVA UNIVERSITY

December 31, 1976

JC 770 085

TABLE OF CONTENTS

	Page
Abstract	iii
List of Tables	iv
List of Illustrations	v
Introduction	1
Background and Significance	3
Procedures	24
Limitations	25
Assumptions	25
Definition of Terms	27
Results	29
Discussion, Implications, and Recommendations	53
Discussion and Implications	53
Summary	62
Recommendations	64
Appendix	66
Bibliography	71

ABSTRACT

Although modified since 1957, Central Florida Community College's general education requirements continue to be very demanding and inflexible. This practicum compared CFCC's policy with those of the 27 other public community colleges and the nine state universities in Florida to establish data for the feasibility of changing CFCC's policy.

Results showed CFCC's 39-hour requirement to be more demanding than the majority (78.5 percent) of community colleges and the majority (67 percent) of state universities. Its nine-hour reaquirement each in the areas of communications, humanities, and science was more demanding than the majority of both community colleges and universities. Its nine-hour requirement in social science was more demanding than that of the majority of universities. CFCC's policy offers no flexibility for "free electives" within the five academic areas compared to the majority of universities and 36 percent of community colleges which make provision for such flexibility.

Recommendations included (1) a review of CFCC's policy, (2) a reduction from 39 to 36 semester hours required for general education, and (3) a reduction from 9 to 6 hours in the areas of communications, humanities, social science, and science, to provide "free electives" within the five academic areas to facilitate students meeting needs of their major programs.

LIST OF TABLES

Table		Page
1	Minimum Semester Hours Required for General Education by Community Colleges and State Universities in Florida.	29
2	Minimum Semester Hours Required in Communications General Education Area by Community Colleges and State Universities in Florida.	32
3	Minimum Semester Hours Required in Humanities General Education Area by Community Colleges and State Universities in Florida.	35
4	Minimum Semester Hours Required in Social Science General Education Area by Community Colleges and State Universities in Florida.	38
5	Minimum Semester Hours Required in Science General Education Area by Community Colleges and State Universities in Florida.	41
6	Minimum Semester Hours Required in Mathematics General Education Area by Community Colleges and State Universities in Florida.	44
7	Semester Hours Required for General Education in "Other Courses" by Community Colleges and State Universities in Florida.	47
8	Free Electives Permitted in Minimum General Education Requirements by Community Colleges and State Universities in Florida.	50
Appendix A	Minimum Hours Required to Complete General Education Requirements by Community Colleges in Florida.	67
Appendix B	Minimum Hours Required to Complete General Education Requirements by State Universities in Florida.	70

LIST OF ILLUSTRATIONS

Figure		Page
1	Minimum Semester Hours Required for General Education by Community Colleges in Florida. . .	30
2	Minimum Semester Hours Required for General Education by State Universities in Florida. . .	31
3	Minimum Semester Hours Required in Communications General Education Area by Community Colleges in Florida	33
4	Minimum Semester Hours Required in Communications General Education Area by State Universities in Florida	34
5	Minimum Semester Hours Required in Humanities General Education Area by Community Colleges in Florida.	36
6	Minimum Semester Hours Required in Humanities General Education Area by State Universities in Florida.	37
7	Minimum Semester Hours Required in Social Science General Education Area by Community Colleges in Florida	39
8	Minimum Semester Hours Required in Social Science General Education Area by State Universities in Florida.	40
9	Minimum Semester Hours Required in Science General Education Area by Community Colleges in Florida.	42
10	Minimum Semester Hours Required in Science General Education Area by State Universities in Florida.	43
11	Minimum Semester Hours Required in Mathematics General Education Area by Community Colleges in Florida.	45

Figure		Page
12	Minimum Semester Hours Required in Mathematics General Education Area by State Universities in Florida	46
13	Semester Hours Required for General Education in "Other Courses" by Community Colleges in Florida	48
14	Semester Hours Required for General Education in "Other Courses" by State Universities in Florida	49
15	Free Electives Permitted in Minimum General Education Requirements by Community Colleges in Florida.	51
16	Free Electives Permitted in Minimum General Education Requirements by State Universities in Florida.	52

INTRODUCTION

Although the general education requirements for the Associate of Arts degree at Central Florida Community College have been modified since the college was established in 1957, these requirements continue to be very demanding and rigid.

The Articulation Agreement Between the State Universities and Public Community Colleges of Florida, adopted in 1971, mandated that a community college's general education policy should require a minimum of 36 semester hours of credit (State of Florida, 1971). The agreement, however, specified no particular courses nor any minimum hours within any particular academic area (State of Florida, 1971). Thus, considerable flexibility is permitted, provided a minimum of 36 hours is designated for general education purposes.

This practicum sought to compare CFCC's general education policy with the policies of the 27 other public community colleges in Florida as well as the policies of the nine state universities. The primary source of this information was a review of the general education policies of these 36 institutions as printed in their current catalogs.

The practicum also sought to review recent literature

which might reflect innovations in the establishment of an institution's general education policies.

The purpose of the comparative study was to establish data for the feasibility of changing the existing general education policy at Central Florida Community College and to make definitive recommendations for specific modifications in the college's policy based upon this data.

BACKGROUND AND SIGNIFICANCE

In establishing graduation requirements for transfer degree students, community junior colleges traditionally have included requirements for one's "general education."

> General education refers to programs of education specifically designed to prepare young people for the responsibilities that they share in common as citizens of a free society and for wholesome and creative participation in a wide range of life activities. It is also that part of education which prepares the student to assume his role as an individual, as a member of a family, and as a citizen....It is called 'general' because its purposes are conceived to be common to all men; it is that part of the total collegiate offering which is concerned with men's likenesses rather than with their divergent interests. It intends to assist the student to feel intellectually and psychologically at home in a world which makes new economic, social, civic, physiological, spiritual, and intellectual demands upon him. (Thornton, 1966, p. 199)

Such programs often attempt to provide for general education by recommending a sampling of introductory courses from several areas such as English, science, social sciences, and humanities. Fiscal economy also enters into the picture, since a single course may be made to serve several purposes. "In most subjects, however, the introductory course is planned principally for those students who will study further in the field" (Thorton, 1966, pp. 198-199).

Thus, the purposes of the nonmajor students are likely to be subordinated or completely ignored by the instructor, himself a specialist in the field...

> The establishment of a separate pattern of general education courses is justifiable on the grounds of (1) economy of the student's time, (2) the impossibility of a student's enrolling in all the needed introductory courses, (3) the student's need for a coherent and unified interpretation of modern scholarship, rather than for an introduction to five or six unrelated aspects of it, and (4) efficiency in organizing instruction to achieve general education purposes directly rather than as by-products of specialized courses (Thornton, 1966, p. 199).

In The Community Junior College, Thornton cautions that "too rigid a concentration in any field may deprive the student of the opportunity to acquire understanding which he needs in his roles as citizen, parent, and person" (Thornton, 1966, p. 199).

In the fall of 1958 Central Florida Junior College began instruction for 320 students.

> The Florida State Legislature authorized the establishment of Central Florida Junior College in 1957 as a comprehensive, public community junior college serving the state of Florida in general and especially the area comprised by by the three participating counties -- Citrus, Levy, and Marion (CFCC, 1976, p. 15).

In this first academic year, students seeking the Associate of Arts (AA) degree for transfer to a four-year institution were offered nine AA degree possibilities. These included a "General College Course" for those students uncertain of their four-year degree goals, as well as

Pre-Business Administration, Pre-Agriculture, Pre-Education, Pre-Engineering, Pre-Journalism, Pre-Medical, Pre-Music Education, and Pre-Legal (CFJC, 1958-59). No statement of general education was made.

The two years of study for the eight specific AA programs were very demanding, were rigidly detailed, had little room (if any) for elective courses, and included four credits of physical education requirements (CFJC, 1958-59).

Compared to today's AA requirement of 64 semester hours of credit (CFCC, 1976), seven of these original and very rigid AA programs called for as many as 66, 68, and 72 semester hours of course work (CFJC, 1958-59).

This very rigid concentration obviously went against the theory advanced by Thornton which was cited earlier in this report. However, on March 11, 1963, the college president circulated to all faculty the recommendations made by a faculty committee to revise the college's policy and to make its first attempt at a policy on general education requirements. (CFJC, 1963).

With this report, the president circulated the subsequent recommendations proposed by the Academic Affairs Committee. This recommendation was based on the faculty committee's work. This policy revision was then adopted and has been in effect since 1963, although revisions have been made from time to time. These revisions will be discussed later in this report. (CFJC, 1963).

For the first time, the college now had a statement on General Education policy regarding the AA degree as well as specific requirements by academic area (CFJC, 1963).

This new policy statement appeared to reflect the typical approach to broad-based general education as quoted earlier. It read

> The curriculum provides a program of basic studies in general education which offers the student the opportunity to become acquainted with the common skills, facts, and attitudes needed for personal effectiveness in home and community life--quite apart from vocation. Whether the student pursues his education at higher levels or terminates with a two-year program, he thus gets an opportunity to survey the various areas of knowledge--his world, physical and biological man; man's achievements, social and cultural--enabling him to relate himself as a person to this broad range of human knowledge without regard for narrow professional interest (CFJC, 1963, p. 19).

The requirements for general education were now fully detailed by five areas of concentration. The requirements continued to be both demanding and quite specific:

Area I--Communications (6 sem. hrs.)
Required Course: ENG 121-122--Basic English (3-3)

Area II--Social Studies (6 sem. hrs.)
Required Courses: SOC ST 101-102--American Institutions (3-3), or HY 201-202--World Civilization (3-3).

Area III--Humanities (8 sem. hrs.)
Required Courses: HUM 201-202--Humanities (4-4), or ENG 261-262--World Literature (3-3), and MU 110, Music Appreciation (3), or ART 110--Art Appreciation (3).

Area IV--Mathematics (6 sem. hrs.)
*Required Courses: MS 101--Practical Logic (3), MS 102--Basic Mathematics (3).

Area V--Science (12 sem. hrs.)
*Required Courses: PS 111-112--Physical Science (3-3) and BIOSC 113-114--Biological Science (3-3).

* With the approval of the Dean and the Chairman of the appropriate Division and on the basis of the high school record and superior test scores, students may be allowed to omit courses indicated in each of the areas of mathematics, physical sciences, and biological sciences and substitute therefor (sic) respectively, in these areas, an equivalent number of semester hours of work in courses considered to be more appropriate for their particular program in the field in which they intend to work toward a baccalaureate degree (CFJC, 1963, pp. 19-20).

Although not included in the general education requirements, four semester hours of credit in physical education continued to be required for graduation (CFJC, 1963).

Also, even in the revised policy on general education, the various transfer degrees "prescribed programs" continued to be very demanding and quite inflexible (CFJC, 1963).

Combined, the general education and physical education requirements totaled 43 semester hours. (General education, 39 hours; physical education, four hours.) (CFJC, 1963)

By 1965, the CFJC general education requirements had been revised again and now were developed around a new "common core" program. This common core of 15 semester hours of credit in five academic areas was to be common to both transfer and terminal degree students. It included Basic English (EH 121), Basic Mathematics (MS 102), American Institutions (SO 100), Introduction to Humanities (HM 100), and Introduction to Sci-

ence (SE 100) or three credits from any science. (CFJC, 1965) The remainder of the 39 hours of general education called for six additional credits in each of the following areas: Communication, Humanities, Social Science, and Science. These additional credits could be selected from authorized courses in each area. Thus, students now had more flexibility in meeting their AA degree's general education requirements.

The revised general education requirements that were constructed around the 15-hour common core program were somewhat more flexible in that fewer specific courses were required. But--with the exception of mathematics and science--the total hours requirement became more demanding in three academic areas.

In the communications and social studies area, six additional hours beyond the common core courses were required now in each area (CFJC, 1965). Thus, the requirement for both communications and social studies became nine semester hours as compared to the six required earlier in these areas.

In the humanities area, six additional hours of credit beyond the common core course were now required. The humanities general education requirement thus became nine semester hours compared to eight required previously.

The science requirement was reduced from 12 semester hours of credit (and four specific courses) to a total of nine (CFJC, 1965).

The mathematics requirement was reduced to the common core course. The three-credit course, Practical Logic, was no longer demanded (CFJC, 1965).

Credit by examination was now provided for the Basic English and Basic Mathematics common core courses (CFJC, 1965).

Although not included as general education requirements, four credits of physical education still were required for graduation (CFJC, 1965).

Finally, as before, other transfer degree requirements were dictated by the various "prescribed transfer programs" as detailed in the catalog and continued to allow only minimal flexibility (CFJC, 1965). Paradoxically, there was increased flexibility but, at the same time, minimal flexibility authorized.

As before, the combined general education and physical education requirements totaled 43 semester hours (CFJC, 1965). Thus, approximately two-thirds of a CFJC transfer student's program continued to be consumed by general education requirements. This is contrary to Thornton's belief that a series of general education courses should be developed to require no more than one-third of a junior college student's time....

> It should be possible to construct a series of four courses, comprising twenty-one semester units and affording all students opportunity to improve their preparation for the responsibilities they share in common as citizens in

> a free society, and for wholesome and creative participation in a wide-range of life activities' (Thornton, 1966, p. 212).

It should be noted, however, that Florida state policy as well as state university policies had something to do with this. This will be discussed later.

In 1967-68, two changes occured: physical education was no longer required for graduation and "prescribed programs" no longer appeared in the CFJC Catalog. General education requirements continued to call for 39 semester hours of credit within the minimum of 64 credits required for graduation (CFJC, 1967-68).

No other changes were made in the general education policy until 1971-72. It then became possible for a student to substitute United States History, HY 251, or American National Government, P) 291, for the social studies common core required course. This substitution could be made only if the student scored in the upper third on the High School Social Studies Test and had counselor permission to make the substitution. A total of 39 semester hours of credit continued to be required for general education certification (CFJC, 1971-72).

After 1971-72, no changes were made in the general education policy until 1976-77. It was now possible for a student who had completed two sequential courses in a foreign language to be able to use three of these six credits toward meeting the nine hours required in communications. A total

of 39 semester hours of credit continued to be required for general education certification. (CFCC, 1976-77).

Of course, as most pioneering community junior colleges, CFJC apparently felt considerable domination by the state university system into which most of its transfer students were planning to enroll. This is reflected in the preceding review of CFJC's first years and the demanding rigidity of its AA degree requirements. CFJC was trying to prepare its transfer students for smooth entry as juniors into all four-year institutions despite the fact that there were many program inconsistencies from one university to another.

Another typical obstacle for community junior colleges is that colleges and universities and the schools and departments which they include are constantly studying and changing their own requirements, requiring much effort to keep the junior colleges fully informed....

> But no community junior college sends transfer students to only one university--it is not at all uncommon for graduates of a junior college to be enrolled at as many as thirty or even fifty upper-division institutions in a given year. Each of these institutions, of course, has a pattern of lower-division requirements that differs slightly from all the others. The junior college student himself may further complicate the picture. Some lack the prerequisite courses from high school and must complete them before their lower-division work proceeds; some will drop a single difficult course from a carefully planned freshman program, thus causing a delay in the completion of their transfer requirements; others will change their vocational objectives or their choice of an upper-division college with an

> accompanying loss of time (Thornton, 1966, page 162).

Although not documented, it is felt that CFJC probably began to realize the realities of Thornton's statement as it gradually ceased to require so many specific courses and as it discontinued strict adherence to "prescribed transfer programs."

The problem of university domination of community junior colleges in the State of Florida continued to affect CFJC's lack of innovation in making changes in its general education policies. The problem of university domination

> is one of the pervasive influences that must be recognized in any consideration of the curriculum. At times, this domination is advanced as an excuse for inactivity by the junior colleges; at other times it proves to be a truly frustrating and unnecessary deterrent to soundly conceived experimentation. The solution lies partly in acceptance by the community junior colleges of full responsibility for the preparation of their graduates, with the implied guarantee that the transferring student has achieved an education equivalent to although not identical with that of the four-year-college junior. The other part of the solution lies in the recognition by senior institutions that community junior college faculties have the ability, the resources, the desire, and the obligation to develop curriculums for all their students. When these conditions are achieved, the community junior colleges will begin to develop acceptable general education offerings as those here proposed (Thornton, 1966, p. 210).

Positive action to facilitate a state-wide situation as envisioned above by Thornton was taken in Florida in 1971. The Articulation Agreement Between the State Universities and

Public Community Colleges of Florida was adopted on April 13, 1971. This agreement set forth policies by which state universities and community colleges would abide in peaceful coexistence. In this policy statement

> The Division of Universities and the Division of Community Colleges have jointly adopted this agreement to (1) recommend specific areas of agreement between community colleges and state universities; (2) set forth criteria for awarding the Associate in Arts degree; (3) define the Associate in Arts degree as a component of a baccalaureate degree; (4) provide for a continous evaluation and review of programs, policies, procedures, and relationships affecting transfer of students; and (5) recommend such revisions as are needed to promote the success and general well-being of the transfer student....
>
> Each public institution of higher education in Florida...is encouraged to foster and promulgate a program of general education. This basic program for students working toward a baccalaureate degree should involve not fewer than 36 semester hours of academic credit....
>
> After a public institution of higher learning in Florida has developed and published its program of general education, the integrity of the program will be recognized by the other public institutions in Florida. Once a student has been certified by such an institution as having completed satisfactorily its prescribed general education program, no other public institution of higher learning in Florida to which he may be qualified to transfer will require any further lower division general education courses in his program (State of Florida, 1971, pp. 1-2).

Thus, the State of Florida requires no specific courses for general education certification and requires no more than 36 semester hours of credit for a student to fulfill these requirements. Provisions for reasonable flexibility

were provided for community colleges in their revisions of general education policies. Although the minimum of 36 hours required for general education are more than one-third as recommended by Thornton (1966), Central Florida now had the support of a state policy to lower its requirements from 39 hours to 36.

The CFCC administration studied its general education policy only to the extent that the college could ensure that only courses eligible for the AA degree as defined under 2a of the articulation agreement (State of Florida, 1971, p. 2), were applied to subsequent degrees it conferred. It made no other study of the existing general education policy. The CFCC general education policy continued to require 39 semester hours of credits as specifically detailed: three semester hours of mathematics and nine semester hours each in the areas of communication, humanities, social science, and science. The common core program continued intact and as part of the general education requirements.

In their academic advisement of AA students, CFCC counselors previously had noted that the demands and rigidity of CFCC's requirements were much greater than those of the state universities to which students planned to transfer. The inflexibility of these demands made it difficult for students in extremely demanding major programs, i.e., Music and the pre-professional sciences, to meet their general education requirements.

In July, 1971, following the adoption of the state's articulation agreement, the CFCC Counseling Department presented a proposal to the college's Academic Affairs Committee. Having researched the inequities and inflexibilities in the existing CFCC policy as compared to the policies of state universities, the Counseling Department asked for a review of the general education policy. It was felt that the articulation agreement reduced the domination by the state university system that the college had felt earlier. The proposal requested flexibility only and did not seek a reduction from 39 to 36 hours.

The July 6, 1971, minutes of the CFCC Academic Affairs Committee indicated that a committee would meet on July 8, 1971, to examine such requirements and the Counseling Department recommendation. (CFCC, 1971) This July 8 meeting was cancelled. To date the topic has never been discussed.

In its first Educational Policy Systems Module seminar, the Orlando II Cluster was told by Dr. Fred A. Nelson, its national lecturer, that any group--on the basis of one or more shared interests--has to make certain claims on other groups for the maintenance, protection, and enhancement of its position and that often the interplay of forces -- resources, status, and position -- affects policy-making.

CFCC's Director of Counseling, a member of the

Academic Affairs Committee, stated that the committee's failure to review the Counseling Department recommendation seemed to reflect the interplay described by Dr. Nelson.

In essence, a change in CFCC's policy to permit flexibility in meeting the general education requirements within the five academic areas was perceived as threatening to Division Directors, their instructors, and their course offerings. To maintain the status quo facilitated the maintenance and protection of the positions of these academic divisions (CFCC, 1976).

However, it should be noted that since 1971, CFCC annually has experienced vast growth in student population. For example, according to the CFCC Registrar's Office, the 1976-77 fall student enrollment showed an increase of 12.5 percent over the 1975-76 fall enrollment (CFCC, 1976). As a result, the college has continued to employ additional full-time and increasing numbers of part-time faculty to handle the increased teaching load.

This paper seeks neither to criticize nor attack the concept of general education. To suggest closer adherence to Thornton's viewpoint that general education should constitute no more than one-third of the total AA degree (Thornton, 1966) would be futile, even though desirable. The articulation agreement mandates a minimum of 36 semester hours of credit for general education (State of Florida, 1971).

It was not felt futile, however, to recommend a review of the existing policy to seek more flexibility and, perhaps, a reduction from 39 to 36 semester hours of credit. The articulation agreement (State of Florida, 1971) provides freedom in the establishment of a community college's general education policy.

It was hoped that a review of recent literature would provide innovative direction for the re-development of CFCC's policy. Although a number of journal articles on the subject appear, most of these are expressions of support for the concept rather than reports of successful innovations or suggested innovations. An ERIC search which authorized 100 citations produced only eight referrals which actually talked to the subject.

Suddarth (1975) reports the first two years of a four-year study of 1100 beginning freshmen (including an experimental group of 400 who were permitted to waive any or all core requirements). She reports that the experimental group has had higher grades with higher course loads. It has also selected many core courses even though these were not required. This experimental group has indicated greater satisfaction than those students not in the experimental group.

Gordon (1970) describes the dissatisfaction with typical general education policies that had been felt by the University of Utah.

In 1965, the university's Policy Committee was asked to evaluate the general education program and to make

recommendations for its revision and improvement. Gordon reports that students had found the old programs rigid, a hurdle, irrelevant, and taught by left-over teachers. Under a new office recommended by the Policy Committee -- Dean of General Education -- many changes were made. This newly appointed dean and a General Education Council decided that English Composition was the only course absolutely necessary for each undergraduate. Five academic area requirements were created, from which students could choose four, which provided considerable more flexibility in the policy. Gordon reports that although there was some faculty and departmental opposition at first, this was overcome. Consequently, new and exciting courses have been created and the student body, according to Gordon, appears much more satisfied with the university's curriculum.

Even more liberal and untraditional is a community college degree, Associate in General Studies, described by Shandloff (1974). This degree is individualized and has no course requirements. Shandloff's follow-up research -- a student characteristic survey -- shows that the AGS student is more like his university counterpart than his community college peers. Her findings also belie the assumption that such an innovative program will attract the irresponsible and incapable student.

Some innovative thinking has sprung forth from particular disciplines to reduce the rigidity of general

education requirements within these particular academic areas. These thoughts indicate that with proper planning and development, it is possible to better meet student needs, relevancy, and the objectives of general education.

Reichman (1973) details how an introductory Political Science-American Government course could be devised which would fulfill the needs and objectives of relevancy, general education, political science, and his state's (California) general education-social science requirements.

Kumar (1975) describes a full but flexible program to enhance the social dimensions of engineering education. This program requires a minimum of 36 quarter hours in the broad categories of English Composition (8-10 credits), Man and Society (12-15 credits), Artistic Expression (8-10 credits), and the balance from any of these categories or from biological sciences and ecology. This program provides considerable flexibility, obviously.

McCluskey and Worley (1974) in an extensive research report, show how community college social sciences general education requirements can be approached. The curriculum of a discipline-based social science department was studied by developing a program-priority-value-matrix. Three factors were used: (1) program priority; (2) student demand priority; and (3) cost per credit hour. Their hypothesis that decision making curriculum managers perpetuate the dichotomy between discipline-based and vocational/technical education was

sustained. Social science courses had little or no demand/priority in vocational programs. A policy of 40 percent specialization requirements, 40 percent general education requirements, and 20 percent electives was recommended so that a student can break out of the rigid tracking system.

Friesen (1974) describes extensive research into the mathematics area of general education. Of 86 community colleges he surveyed, 93 percent felt that students should have options in meeting the general education mathematics requirements. Among other data Friesen derived from his study, he concludes that mathematics mini-courses appear to offer one solution to the problem of providing a relevant general education mathematics course.

As a result of this historical study of CFCC's general education policy, it was decided appropriate to develop a Nova University research practicum on the feasibility of changing CFCC's general education policy.

CFCC operates within a vast system of state universities and community colleges. Therefore it was felt that a comparative study of the general education policies of all of these state institutions would provide insight into making positive, well-founded recommendations for a local review of the existing policy. Since all of these institutions come under the state's articulation agreement, it was hoped that the comparative study would encourage CFCC's Academic Affairs

Committee to seek out less traditional, less demanding, and more flexible approaches for its students to meet general education requirements.

In so doing, the Academic Affairs Committee could overcome the pitfall Thornton cautions against:

> ...too rigid a concentration in any field may deprive the student the opportunity to acquire understanding which he needs in his roles as citizen, parent, and person. (Thornton, 1966, p. 199).

In responding to the significance of the proposed comparative study, Dr. James F. Gilligan, CFCC's Dean of Student Affairs, commented

> (this proposal) should be of interest not only to our institution but to institutions throughout the state. It should be of particular interest to the Articulation Coordinating Committee of the State of Florida as it has been five years since the original section on General Education of the Articulation Agreement was written.
>
> Because of certain inflexibilities in our general education requirements at Central Florida Community College, I feel our own program needs to be evaluated. With the emphasis on "time shortened degrees," we don't need any artificial and meaningless barriers attached to student goals. I wholeheartedly endorse this project.

CFCC counselors Karen Williams and T. Joseph Wooten, also endorsed the proposal. Mrs. Williams commented:

> As a community college counselor who works primarily with science majors, I feel that there is a definite need for investigating the general education requirements at other colleges. Science majors often have a demanding set of required pre-professional courses and labs and find it difficult to meet these

requirements and our inflexible general education requirements within a four-semester time span.

Mr. Wooten commented:

I have recommended in the past and continue to recommend a change in CFCC's general education requirements from the present 39 hours (consisting of nine hours each in humanities, natural science, communications, and social science and three hours in mathematics) to a more flexible requirement. My recommendation has been simply to change the nine hours each to six hours each and to require the remaining twelve hours to be selected from the five academic areas. This would more than meet the the articulation agreement's requirement of 36 semester hours as well as to enable a student to efficiently use these general education "electives" to fulfill the needs of his/her major and/or certain "general distribution" or "graduation" requirements imposed by some colleges within the state university system.

George M. Hitchcock, Jr., Director of Counseling and a member of the Academic Affairs Committee, added, in his endorsement of the proposal

Once something gets established it is extremely difficult to get changed, as any modifications inevitably cause realignments in the various components of the system.

It is interesting to compare the general education requirements among the colleges. It appears more a matter of the exercise of local control and individualization. The professionals cannot seem to agree on the basic principles -- or even categories....I've seen mathematics counted as "communication" and psychology excluded from the social sciences, etc...

There exists in every business and profession an economic base and -- for colleges -- it is the "bread-and-butter" courses that generate the profit to finance the "special" courses. We make these "required" and define pre-requisites to

guarantee the proper sequencing. There seems a lack of trust between professionals that makes us presume that "our" department's offerings in a basic course is better than another department's offering. There exist many safeguards: registrars, accreditation agencies, licensure, certification, etc., to insure standards that certain courses equal certain courses. The practical question (or fear) is: "If we do not require the "core" courses, what would we do with the extra teachers?" "How many students would take the course if it weren't required?" What is the real reason behind professional organizations and deceptions when they go on record against the time-shortened degree mechanisms?

The economic implication is how much non-production can we afford? The societal problem is how can we keep everybody busy? The psychological question is how can everyone find meaning in his pursuits? For the "system", can it be oriented to <u>facilitate</u> rather than to <u>frustrate</u> the consumer?

Inasmuch as it was entirely feasible to undertake the comparative investigation, it was decided to do so.

PROCEDURES

The following procedures were followed in developing the data for this comparative study of the general education requirement policies of community colleges and state universities in Florida:

(1) The general education policies and specific requirements for each of Florida's 28 community colleges and nine state universities were accumulated from the current catalogs of these institutions.

(2) Summary sheets were prepared to detail these general education requirements (See Appendices A and B). The summary sheets presented total minimum semester hours of credit required as well as total hours required by academic area, i.e., communications, humanities, social science, natural science, mathematics, "other required," and "free electives within these academic areas." (With the exception of two community colleges which require physical education as a part of the minimum hours required for general education, physical education requirements were not included.)

(3) From the summary sheets, data were compiled in comparison tables. The data were also graphically presented. Tables and graphs were done for each topic broken down in the summary sheets--for both community colleges and state universities. Each table also summarized the information for all

institutions (community colleges and universities) combined.

(4) Using the tables and graphs, an analysis of the data was made, from which discussion, implications, and recommendations were made.

(5) Since this comparative study employed no experimental design, no statistical analysis procedures were necessary. However, percentage figures were established throughout the study and appear in all tables and graphs. These percentage figures were used in the discussion, implications, and recommendations section of the study.

Limitations

The following limitations were considered as this study was developed:

(1) Inasmuch as college and university catalogs were to be the primary source of data for the study, the study could suffer if the catalog statements on general education requirements were ambiguously stated and not specifically delineated.

(2) If the CFCC Academic Affairs Committee were rigidly dedicated to its existing general education policy, no recommendations for change would be considered, no matter how well-established and presented.

Assumptions

The following basic assumptions were made as this study was initiated:

(1) It was assumed that the current catalogs of each institution were up-to-date and presented an accurate detailing of the institution's general education policy and specific requirements.

(2) It was assumed that perhaps the more recently-established community colleges in Florida would have established more innovative, flexible approaches in the development of their general education policies than the older institutions. Therefore, the data (see Appendix A) include date of establishment for each community college.

(3) It was assumed that Central Florida Community College was more demanding in the minimum semester hours required for general education than the greater percentage of community colleges and state universities in Florida.

(4) It was assumed that CFCC was more demanding and inflexible in the minimum semester hours required in each of the five academic areas for general education than the greater percentage of community colleges and state universities in Florida.

(5) It was assumed that the comparative study would produce data for a firm foundation from which to make recommendations for review and re-development of CFCC's existing policy on general education requirements.

Definition of Terms

The following terms appear throughout the study:

(1) AA degree: an abbreviation for the Associate of Arts degree (see below).

(2) Associate of Arts degree: a two-year community college degree which prepares a student for entry as a junior into a four-year institution. This degree includes courses and/or semester hours of credit required for general education certification.

(3) CFCC: an abbreviation for Central Florida Community College, one of 28 public community colleges in Florida, located in Ocala.

(4) General Education: "Programs of education specifically designed to prepare young people for the responsibilities that they share in common as citizens of a free society and for wholesome and creative participation in a wide range of life activities...." (Thornton, 1966, p. 199). Institutional general education policies state the minimum credit hours as well as any particular courses required of a student for an AA degree. (Note: this term is synonymous with "liberal education," "liberal studies," "general studies," etc., as employed by some institutions. "General education" was used throughout this study.)

(5) Quarter credit hours: State universities in Florida operate on the quarter system and, therefore, offer

quarter units of credit toward one's general education and graduation requirements. Inasmuch as public community colleges in Florida operate on the semester system, all quarter hour requirements were converted to semester hours and rounded off.

(6) Semester credit hours: units of credit applied toward one's general education and graduation requirements. Public community colleges in Florida operate on the semester system, whereas state universities operate on the quarter system. For this study, quarter hours were converted to semester hours and rounded off.

RESULTS

Table 1 below compares the minimum semester hours required for general education by the 28 community colleges and nine state universities in Florida. (See Appendices A and B, pages 67 and 70 , for supportive data.)

TABLE 1

MINIMUM SEMESTER HOURS REQUIRED FOR GENERAL EDUCATION BY COMMUNITY COLLEGES* AND STATE UNIVERSITIES IN FLORIDA

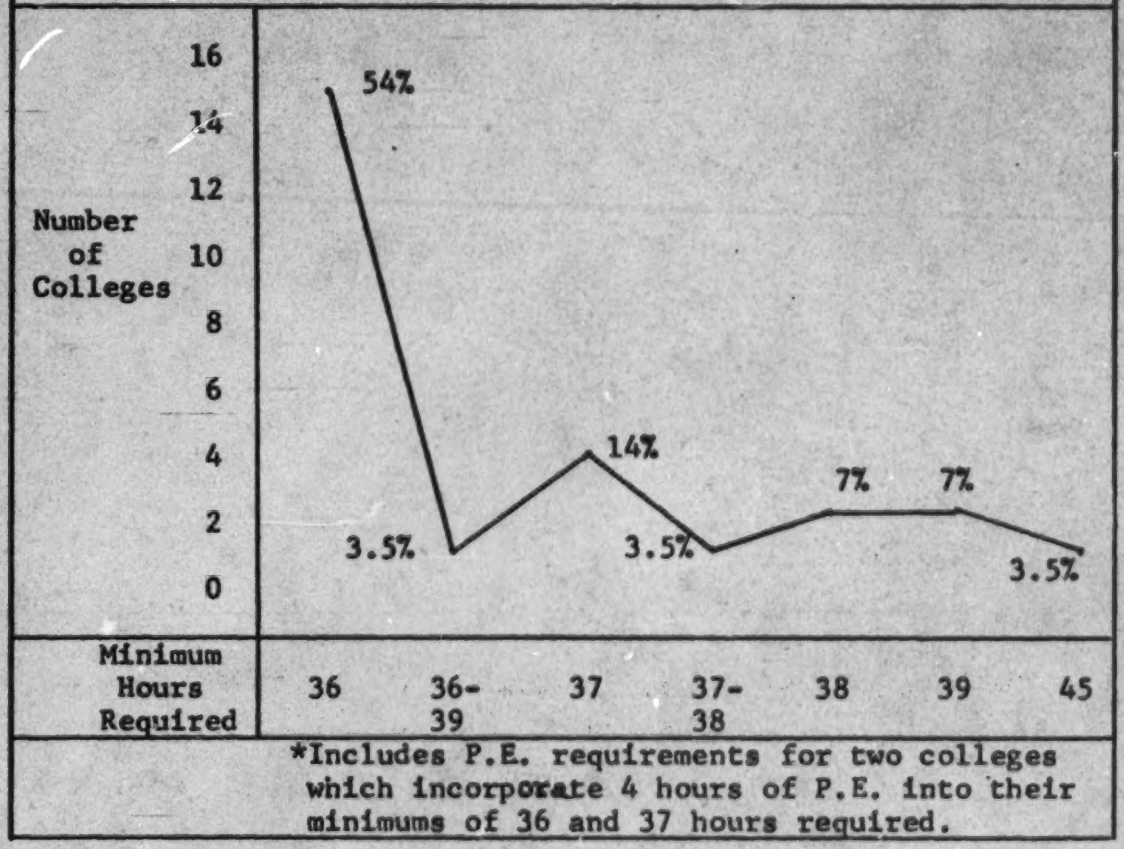
Number of Hours Required	COMMUNITY COLLEGES (N=28) Number	Percent of Total	STATE UNIVERSITIES** (N=9) Number	Percent of Total	ALL INSTITUTIONS (N=37) Number	Percent of Total
57	---	--	1	11%	1	3%
45	1	3.5%	---	---	1	3%
40	---	--	2	22%	2	5%
39	2	7%	---	---	2	5%
38	2	7%	---	---	2	5%
37-38	1	3.5%	---	---	1	3%
37	4	14%	1	11%	5	14%
36	15	54%	5	56%	20	54%
36-39	1	3.5%	---	---	1	3%
Not Specified	2	7%	---	---	2	5%

*Does not include P.E. requirements of nine community colleges that require P.E., but does include P.E. for two community colleges which incorporate 4 hours of P.E. into their minimums of 36 and 37 credits required.
**Converted from quarter hours and rounded off.

Figure 1 below graphically presents this information for community colleges.

FIGURE 1

MINIMUM SEMESTER HOURS REQUIRED FOR GENERAL EDUCATION BY COMMUNITY COLLEGES IN FLORIDA (Excluding P.E.*)



*Includes P.E. requirements for two colleges which incorporate 4 hours of P.E. into their minimums of 36 and 37 hours required.

Figure 2 on the following page graphically presents this information for state universities.

FIGURE 2

MINIMUM SEMESTER HOURS REQUIRED
FOR GENERAL EDUCATION BY
STATE UNIVERSITIES IN FLORIDA
(Converted from Quarter Hours and Rounded Off)

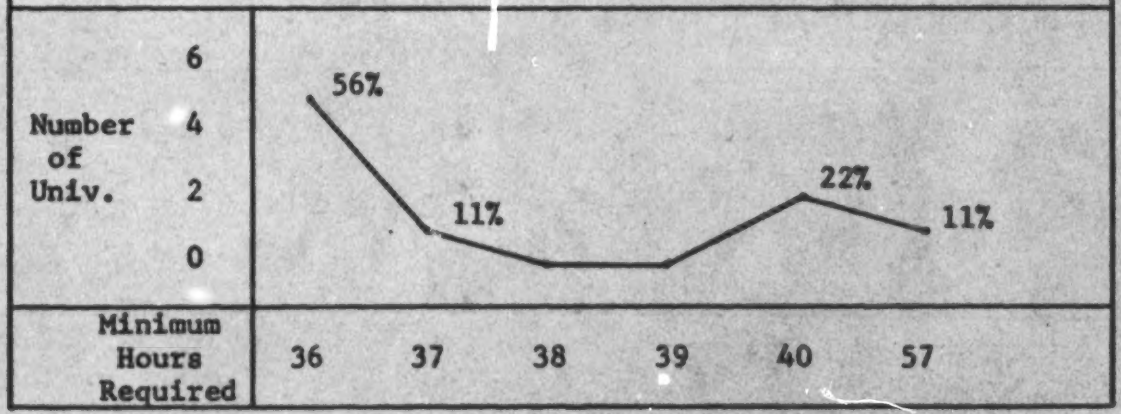


Table 2 on the following page compares the minimum semester credit hours required by Florida's community colleges and universities to satisfy Communications (English) requirements for general education. (See Appendices A and B, pages 67 and 70, for supportive data.)

TABLE 2

MINIMUM SEMESTER HOURS REQUIRED IN COMMUNICATIONS GENERAL EDUCATION AREA BY COMMUNITY COLLEGES AND STATE UNIVERSITIES IN FLORIDA

Number of Hours Required	COMMUNITY COLLEGES (N=28) Number	Percent of Total	STATE UNIVERSITIES* (N=9) Number	Percent of Total	ALL INSTITUTIONS (N=37) Number	Percent of Total
9	7	25%	---	---	7	19%
8	---	---	---	---	---	---
7	---	---	1	11%	1	3%
6	18	64%	6	67%	24	65%
5	---	---	1	11%	1	3%
Depends on Comm/Hum. Option	---	---	1	11%	1	3%
Not Specified	3	11%	---	---	3	8%
TOTALS:	28	100%	9	100%	37	101%**

**Due to rounding off.

*Converted from quarter hours and rounded off.

Figure 3 on the following page graphically presents this information for community colleges.

FIGURE 3

MINIMUM SEMESTER HOURS REQUIRED IN COMMUNICATIONS GENERAL EDUCATION AREA BY COMMUNITY COLLEGES IN FLORIDA

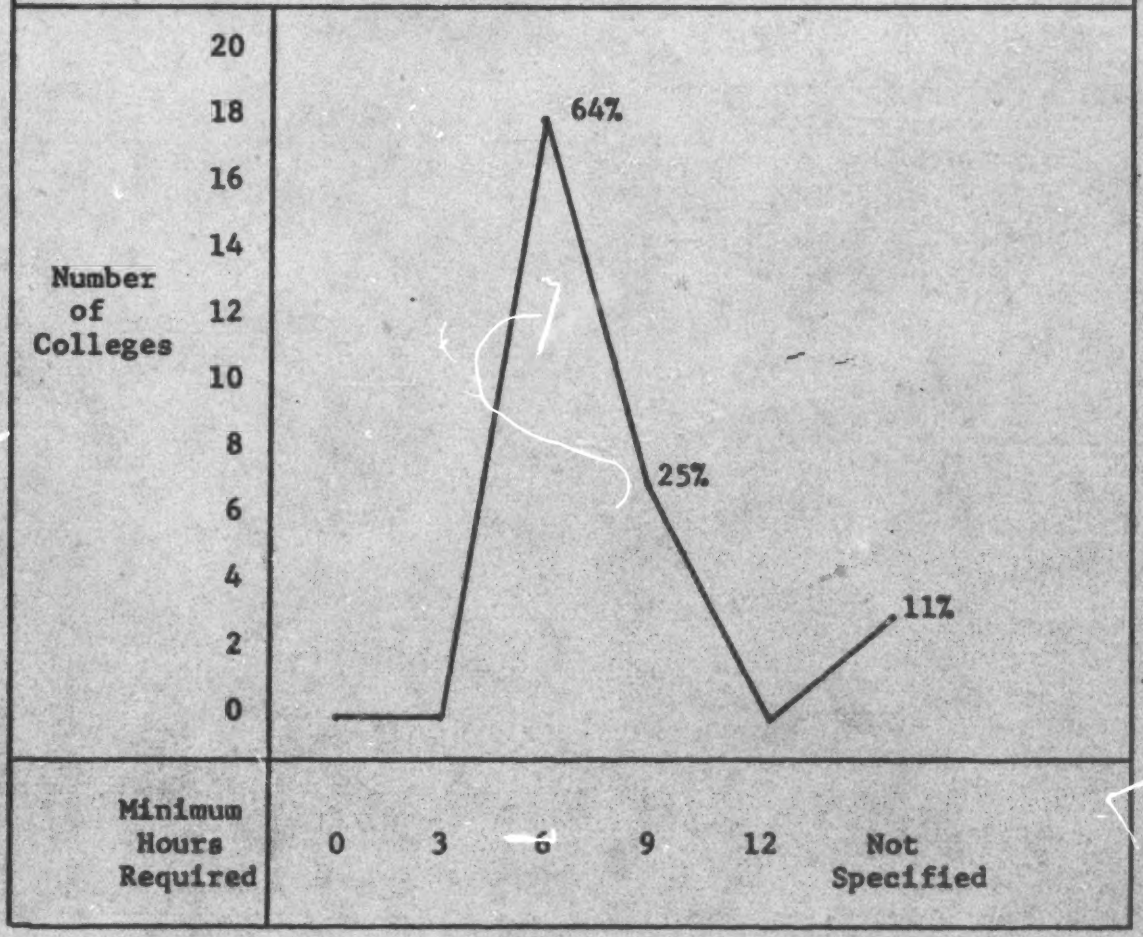


Figure 4 on the following pages presents this information graphically for state universities.

FIGURE 4

MINIMUM SEMESTER HOURS REQUIRED IN COMMUNICATIONS GENERAL EDUCATION AREA BY STATE UNIVERSITIES IN FLORIDA
(Converted from Quarter Hours and Rounded Off)

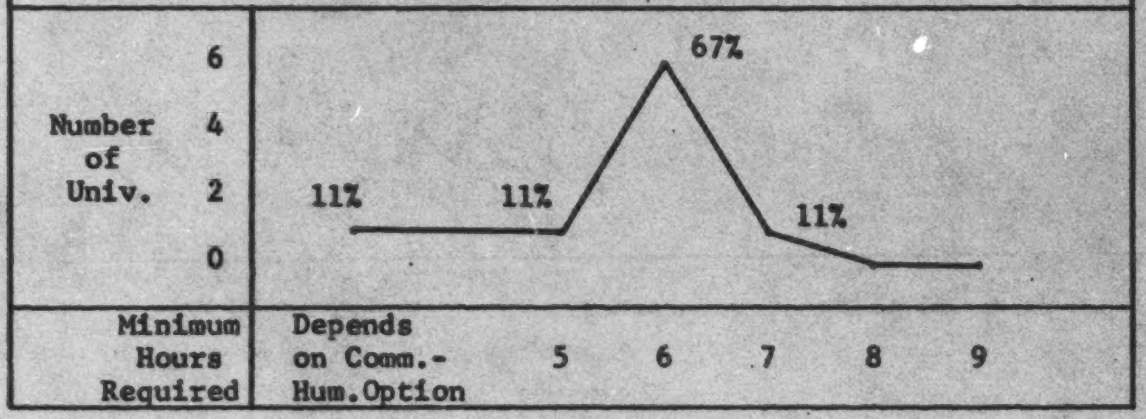


Table 3 on the following page compares the minimum semester credit hours required by Florida's community colleges and universities to satisfy Humanities requirements for general education. (See Appendices A and B, pages 67 and 70 , for supportive data.)

TABLE 3

MINIMUM SEMESTER HOURS REQUIRED IN HUMANITIES GENERAL EDUCATION AREA BY COMMUNITY COLLEGES AND STATE UNIVERSITIES IN FLORIDA

Number of Hours Required	COMMUNITY COLLEGES (N=28) Number	COMMUNITY COLLEGES (N=28) Percent of Total	STATE UNIVERSITIES* (N=9) Number	STATE UNIVERSITIES* (N=9) Percent of Total	ALL INSTITUTIONS (N=37) Number	ALL INSTITUTIONS (N=37) Percent of Total
12	---	---	1	11%	1	3%
9	7	25%	---	---	7	19%
8	1	3.5%	2	22%	3	8%
7	1	3.5%	1	11%	2	5%
6	14	50%	3	33%	17	46%
5	---	---	1	11%	1	3%
6-9	1	3.5%	---	---	1	3%
8-9	1	3.5%	---	---	1	3%
Depends on Comm/Hum. Option	---	---	1	11%	1	3%
Not Specified	3	11%	---	---	3	8%
TOTALS:	28	100%	9	99%**	37	101%**

*Converted from quarter hours and rounded off.
**Due to rounding off

Figure 5 below graphically presents this information for community colleges.

FIGURE 5

MINIMUM SEMESTER HOURS REQUIRED IN HUMANITIES GENERAL EDUCATION AREA BY COMMUNITY COLLEGES IN FLORIDA

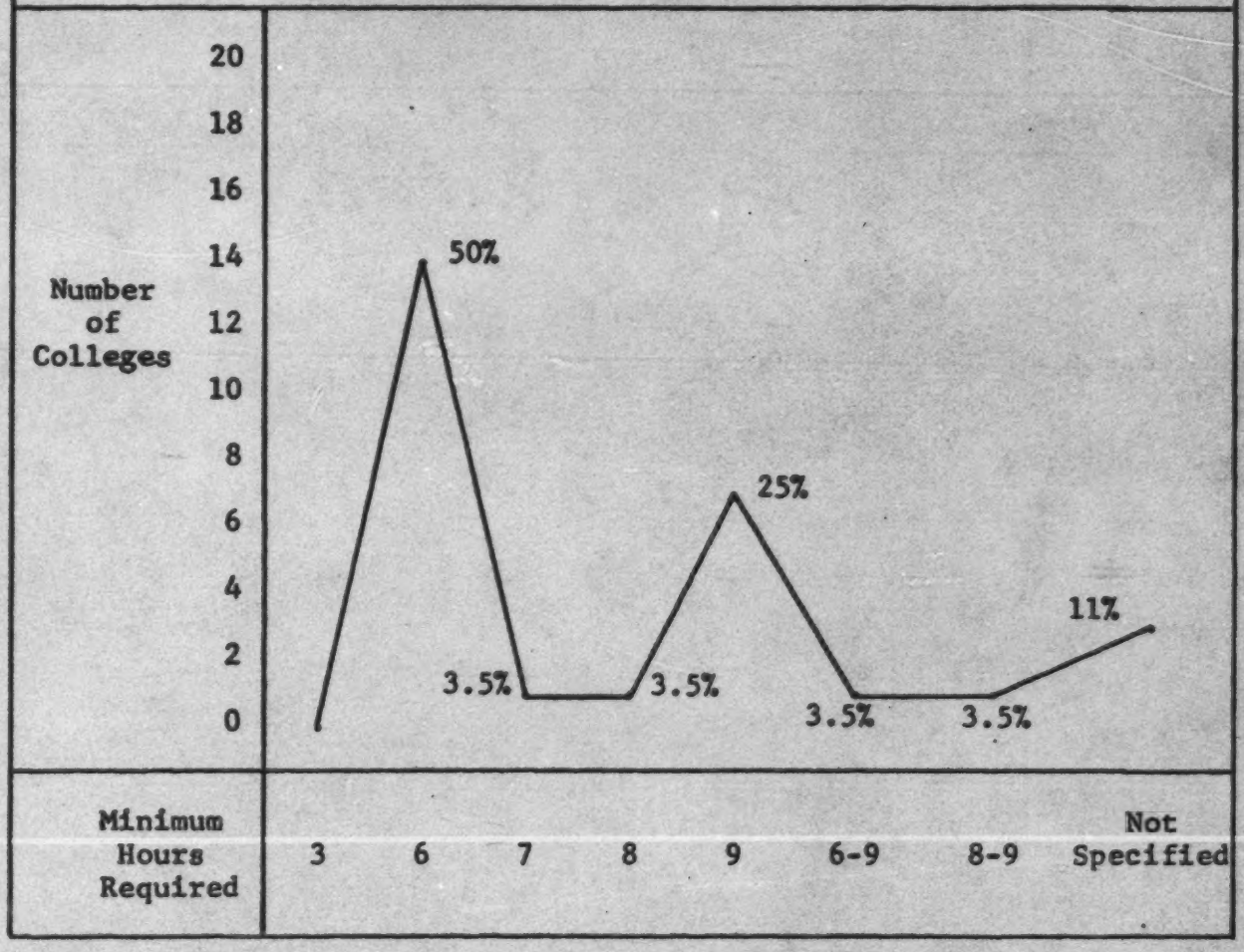


Figure 6 on the following page graphically presents this information for state universities in Florida.

FIGURE 6

MINIMUM SEMESTER HOURS REQUIRED IN HUMANITIES GENERAL EDUCATION AREA BY STATE UNIVERSITIES IN FLORIDA
(Converted from Quarter Hours and Rounded Off)

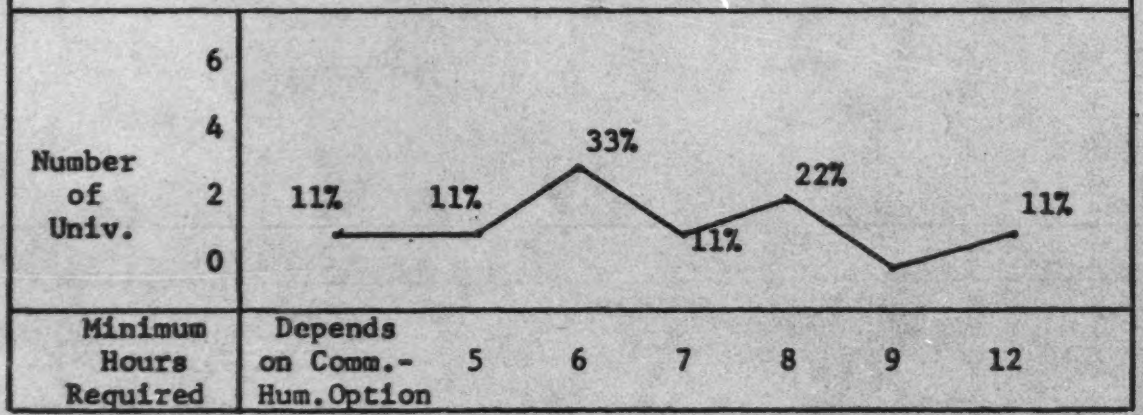


Table 4 on the following page compares the minimum semester credit hours required by Florida's community colleges and universities to satisfy Social Science requirements for general education. (See Appendices A and B, pages 67 and 70 , for supportive data.)

TABLE 4

MINIMUM SEMESTER HOURS REQUIRED IN SOCIAL SCIENCE GENERAL EDUCATION AREA BY COMMUNITY COLLEGES AND STATE UNIVERSITIES IN FLORIDA

Number of Hours Required	COMMUNITY COLLEGES (N=28)		STATE UNIVERSITIES* (N=9)		ALL INSTITUTIONS (N=37)	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
14	---	---	1	11%	1	3%
12	2	7%	1	11%	3	8%
11	---	---	1	11%	1	3%
9	13	46%	---	---	13	35%
8	---	---	1	11%	1	3%
6	10	36%	4	44%	14	38%
5	---	---	1	11%	1	3%
Not Specified	3	11%	---	---	3	8%
TOTALS:	28	100%	9	99%**	37	101%**

*Converted from quarter hours and rounded off.
**Due to rounding off

Figure 7 on the following page graphically presents this information for community colleges.

FIGURE 7

MINIMUM SEMESTER HOURS REQUIRED IN SOCIAL SCIENCE GENERAL EDUCATION AREA BY COMMUNITY COLLEGES IN FLORIDA

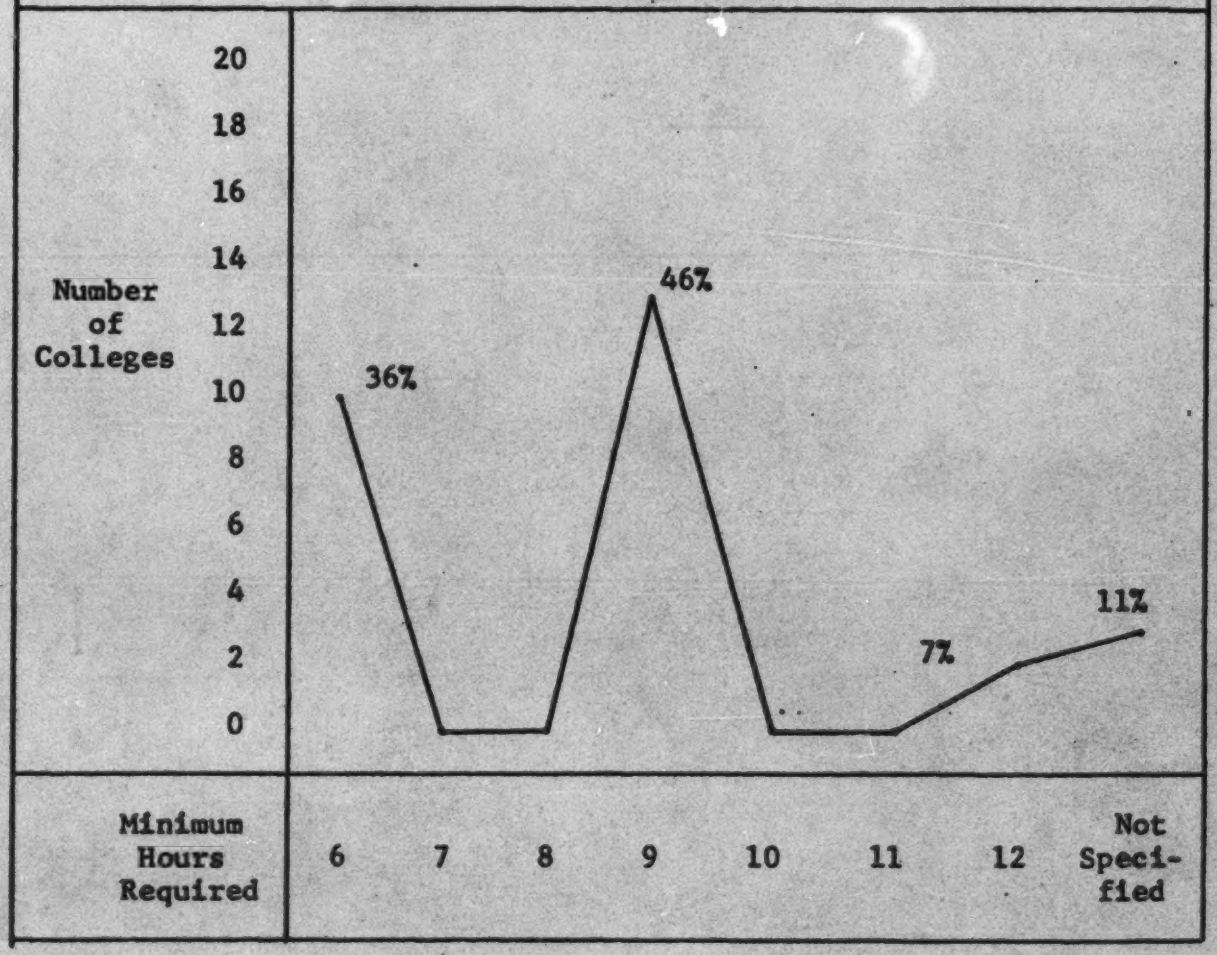


Figure 8 on the following page graphically presents this information for state universities in Florida.

FIGURE 8

MINIMUM SEMESTER HOURS REQUIRED IN SOCIAL SCIENCE GENERAL EDUCATION AREA BY STATE UNIVERSITIES IN FLORIDA
(Converted from Quarter Hours and Rounded Off)

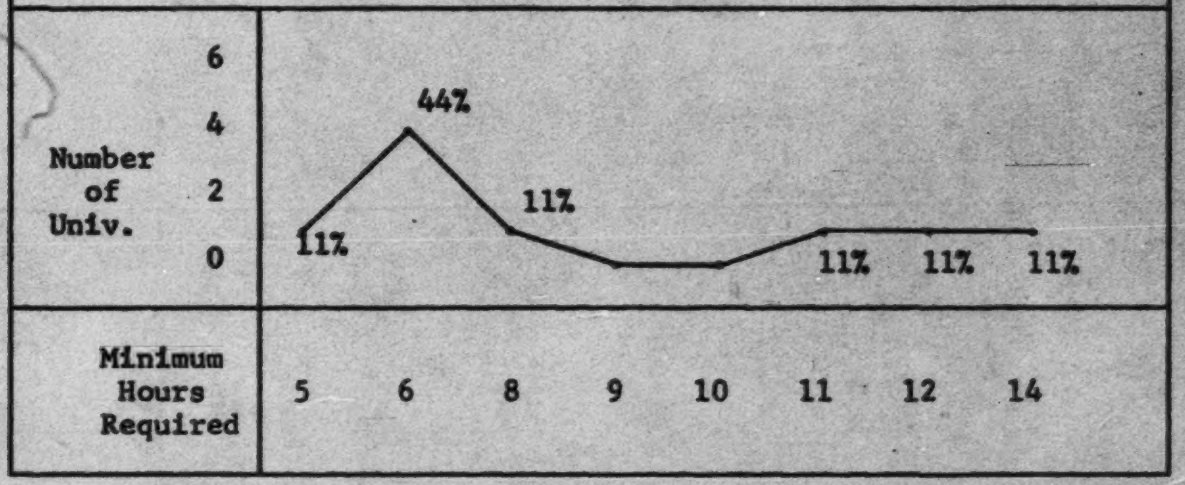


Table 5 on the following page compares the minimum semester credit hours required by Florida's community colleges and universities to satisfy Science requirements for general education. (See Appendices A and B, pages 67 and 70 , for supportive data.)

TABLE 5

MINIMUM SEMESTER HOURS REQUIRED IN SCIENCE GENERAL EDUCATION AREA BY COMMUNITY COLLEGES AND STATE UNIVERSITIES IN FLORIDA

Number of Hours Required	COMMUNITY COLLEGES (N=28) Number	COMMUNITY COLLEGES (N=28) Percent of Total	STATE UNIVERSITIES* (N=9) Number	STATE UNIVERSITIES* (N=9) Percent of Total	ALL INSTITUTIONS (N=37 Number	ALL INSTITUTIONS (N=37 Percent of Total
12	2	7%	---	---	2	5%
10	3	11%	1	11%	4	11%
9	6	21%	2	22%	8	22%
8	2	7%	---	---	2	5%
7	2	7%	1	11%	3	8%
6	9	32%	3	33%	12	32%
5	---	---	1	11%	1	3%
Depends on Math/ Sci.Option	1	3.5%	1	11%	2	5%
Not Specified	3	11%	---	---	3	8%
TOTALS:	28	99.5%**	9	99%**	37	99%**

*Converted from quarter hours and rounded off.
**Due to rounding off.

Figure 9 below graphically presents this information for community colleges.

FIGURE 9

MINIMUM SEMESTER HOURS REQUIRED IN SCIENCE GENERAL EDUCATION AREA BY COMMUNITY COLLEGES IN FLORIDA

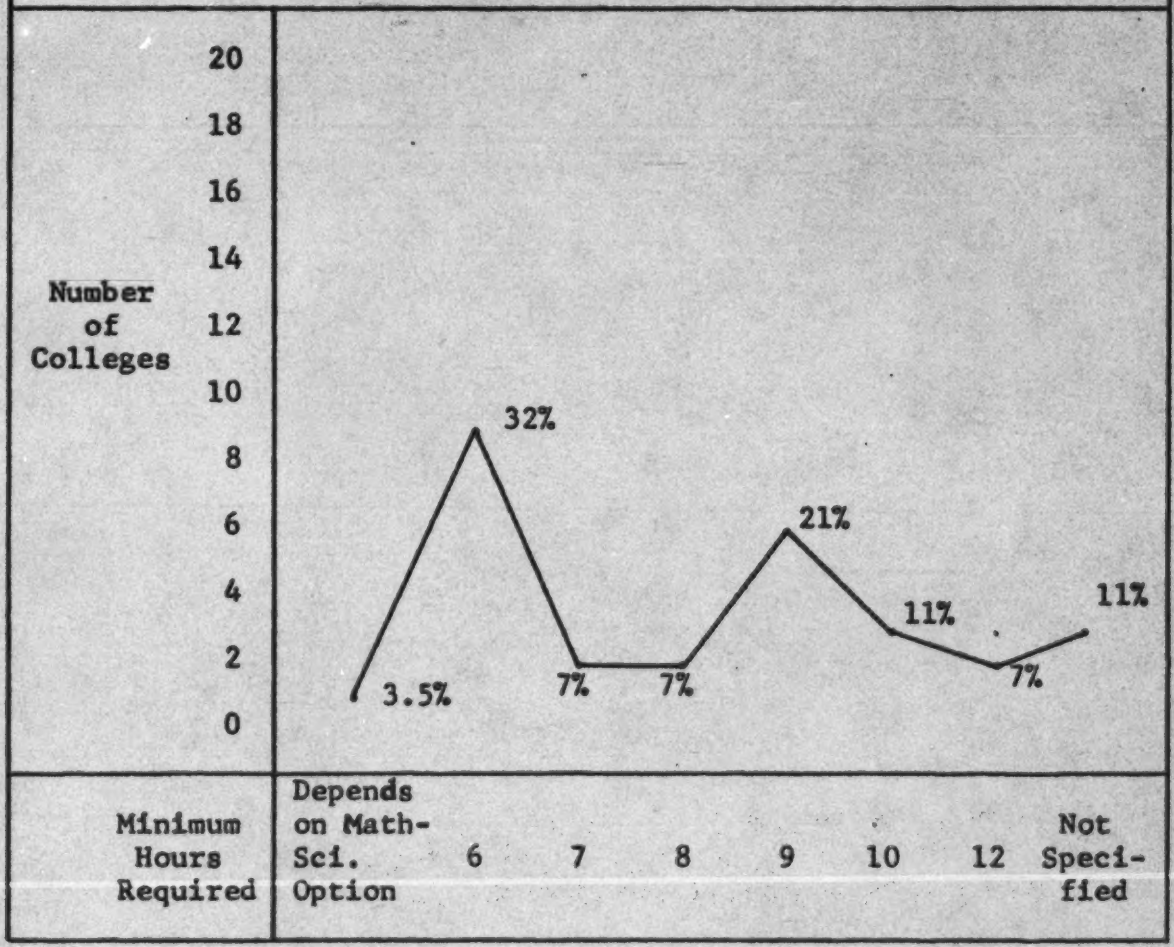


Figure 10 on the following page graphically presents this information for state universities in Florida.

FIGURE 10

MINIMUM SEMESTER HOURS REQUIRED IN SCIENCE GENERAL EDUCATION AREA BY STATE UNIVERSITIES IN FLORIDA
(Converted from Quarter Hours and Rounded Off)

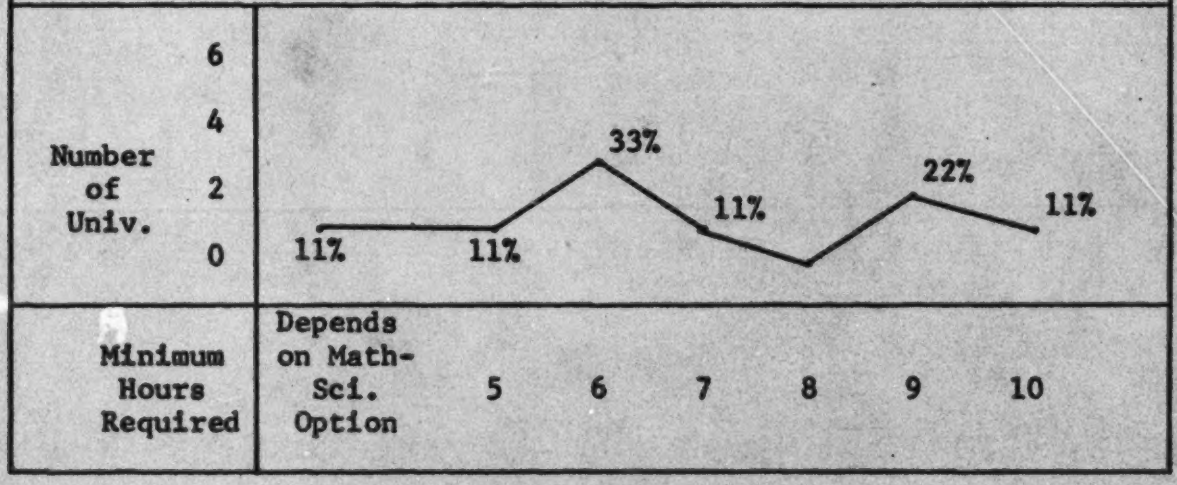


Table 6 on the following page compares the minimum semester hours required by Florida's community colleges and universities to satisfy Mathematics requirements for general education. (See Appendices A and B, pages 67 and 70 , for supportive data.)

TABLE 6

MINIMUM SEMESTER HOURS REQUIRED IN MATHEMATICS GENERAL EDUCATION AREA BY COMMUNITY COLLEGES AND STATE UNIVERSITIES IN FLORIDA

Number of Hours Required	COMMUNITY COLLEGES (N=28) Number	Percent of Total	STATE UNIVERSITIES* (N=9) Number	Percent of Total	ALL INSTITUTIONS (N=37) Number	Percent of Total
6	1	3.5%	1	11%	2	5%
5	---	---	2	22%	2	5%
3	23	82%	5	55%	28	76%
Depends on Math-Sci. Option	1	3.5%	1	11%	2	5%
Not Specified	3	11%	---	---	3	8%
TOTALS:	28	100%	9	99%**	37	99%**

*Converted from quarter hours and rounded off.
**Due to rounding off.

Figure 11 on the following page graphically presents this information for community colleges.

FIGURE 11

MINIMUM SEMESTER HOURS REQUIRED IN MATHEMATICS GENERAL EDUCATION AREA BY COMMUNITY COLLEGES IN FLORIDA

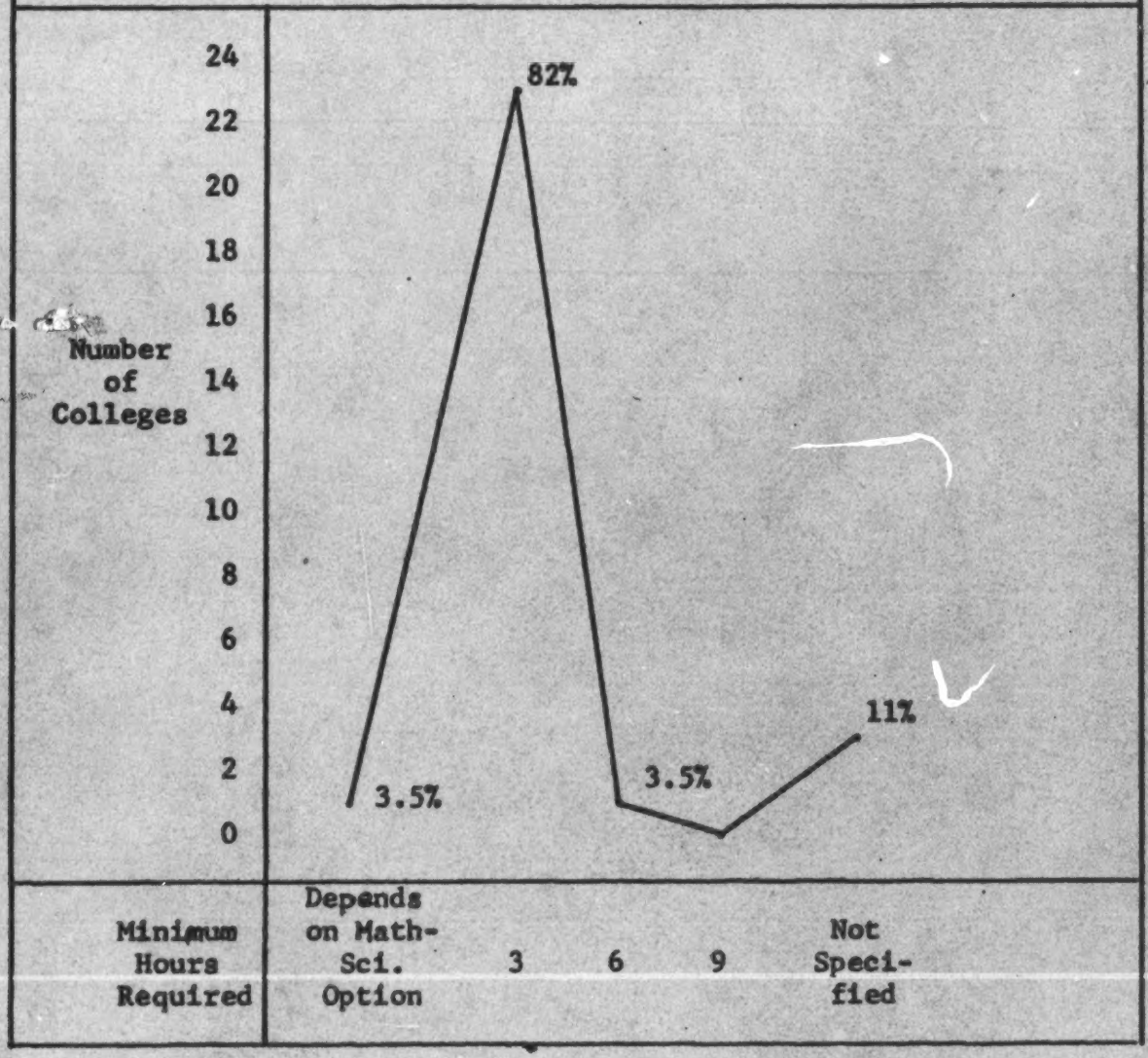


Figure 12 on the following page presents this information graphically for state universities in Florida.

FIGURE 12

MINIMUM SEMESTER HOURS REQUIRED IN MATHEMATICS GENERAL EDUCATION AREA BY STATE UNIVERSITIES IN FLORIDA
(Converted from Quarter Hours and Rounded Off)

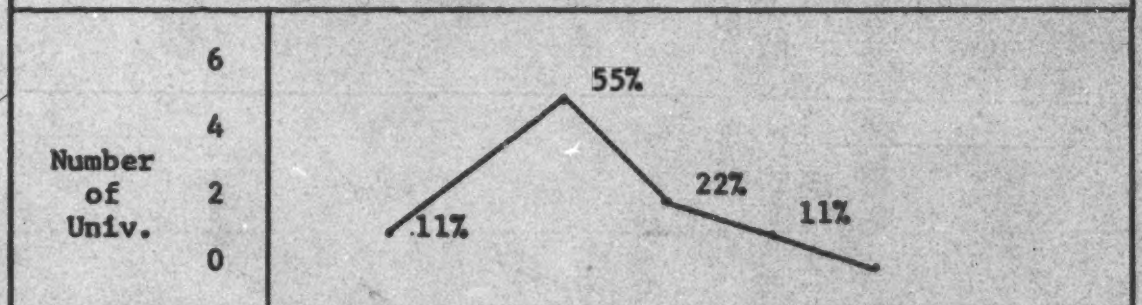


Table 7 on the following page compares the minimum semester hours required by Florida's community colleges and universities to satisfy "Other Courses" requirements for general education. (See Appendices A and B, pages 67 and 70, for supportive data.)

TABLE 7

SEMESTER HOURS REQUIRED FOR GENERAL EDUCATION IN "OTHER COURSES" BY COMMUNITY COLLEGES AND STATE UNIVERSITIES IN FLORIDA

Number of Hours Required	COMMUNITY COLLEGES (N=28) Number	Percent of Total	STATE UNIVERSITIES* (N=9) Number	Percent of Total	ALL INSTITUTIONS (N=37) Number	Percent of Total
12	---	---	1	11%	1	3%
8	1	4%	---	---	1	3%
6	2	7%	---	---	2	5%
4	2	7%	1	11%	3	8%
3	1	3.5%	---	---	1	3%
1	1	3.5%	---	---	1	3%
0	21	75%	7	78%	28	76%
TOTALS:	28	100%	9	100%	37	101%**

*Converted from quarter hours and rounded off.
**Due to rounding off.

Figure 13 on the following page presents this information graphically for community colleges.

FIGURE 13

SEMESTER HOURS REQUIRED FOR
GENERAL EDUCATION IN "OTHER COURSES" BY
COMMUNITY COLLEGES IN FLORIDA
(Excluding Physical Education)

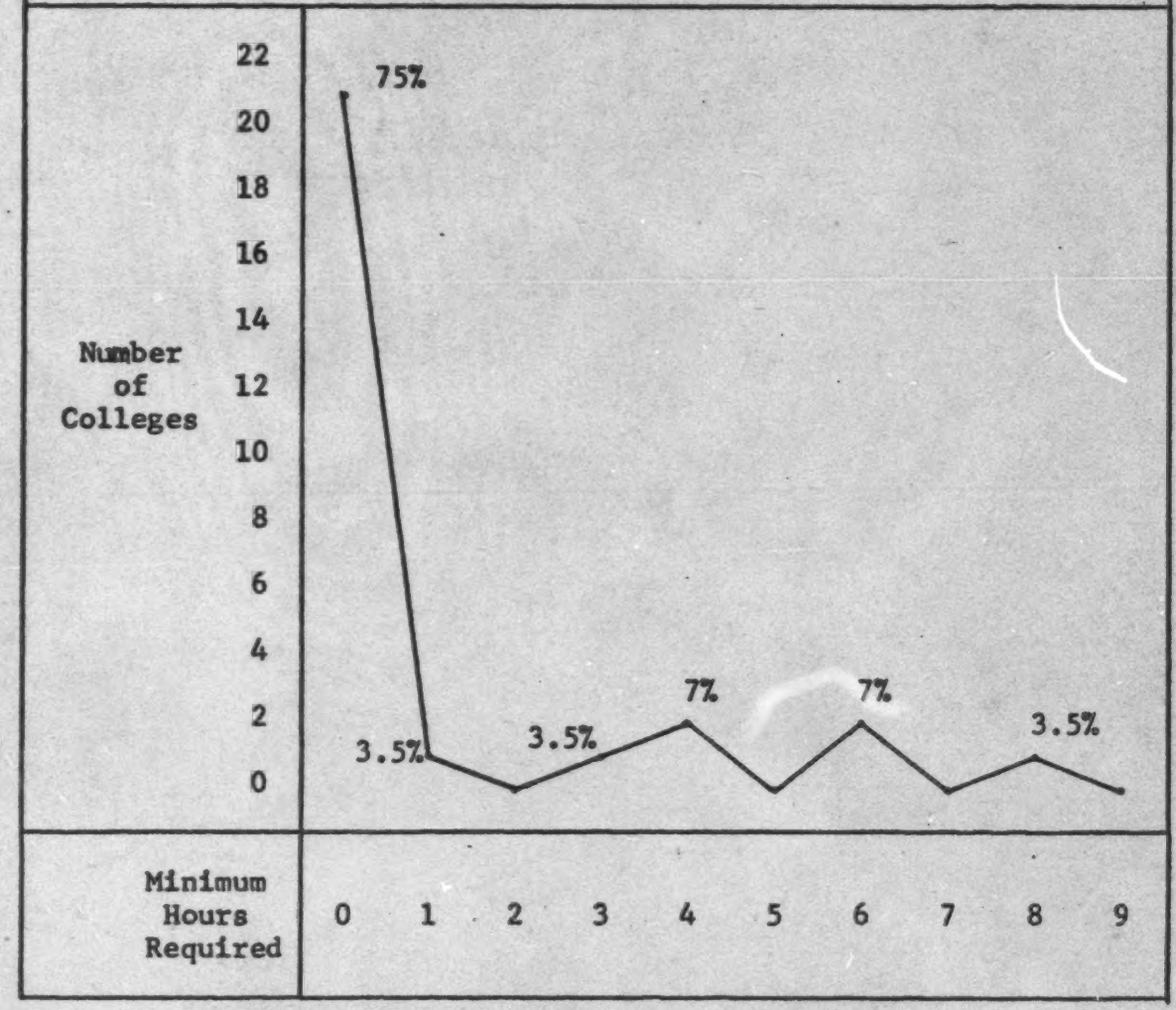


Figure 14 on the following page graphically presents this information for state universities in Florida.

FIGURE 14

SEMESTER HOURS REQUIRED FOR
GENERAL EDUCATION IN "OTHER COURSES" BY
STATE UNIVERSITIES IN FLORIDA
(Excluding Physical Education)

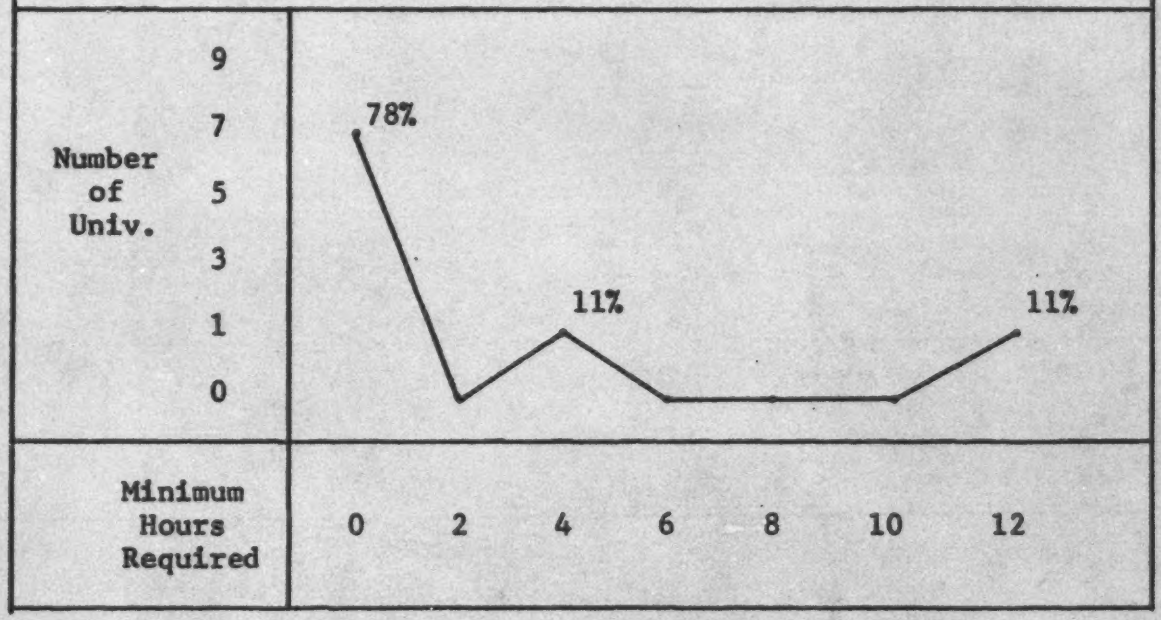


Table 8 on the following page compares the number of free electives within the general education areas permitted by Florida's community colleges and state universities. (See Appendices A and B, pages 67 and 70 , for supportive data.)

TABLE 8

FREE ELECTIVES PERMITTED IN MINIMUM GENERAL EDUCATION REQUIREMENTS BY COMMUNITY COLLEGES AND STATE UNIVERSITIES IN FLORIDA

Number of Hours Required	COMMUNITY COLLEGES (N=28) Number	COMMUNITY COLLEGES (N=28) Percent of Total	STATE UNIVERSITIES* (N=9) Number	STATE UNIVERSITIES* (N=9) Percent of Total	ALL INSTITUTIONS (N=37) Number	ALL INSTITUTIONS (N=37) Percent of Total
ALL Courses Elected Within 3 Areas	1	3.5%	---	---	1	3%
15	---	---	1	11%	1	3%
12	1	3.5%	---	---	1	3%
9	3	11%	3	33%	6	16%
8	1	3.5%	---	---	1	3%
6	2	7%	---	---	2	5%
3	3	11%	3	33%	6	16%
0	17	61%	2	22%	19	51%
TOTALS:	28	100.5%**	9	99%**	37	100%

*Converted from quarter hours and rounded off.
**Due to rounding off.

Figure 15 on the following page graphically presents this information for community colleges.

FIGURE 15

FREE ELECTIVES PERMITTED IN MINIMUM GENERAL EDUCATION REQUIREMENTS BY COMMUNITY COLLEGES IN FLORIDA

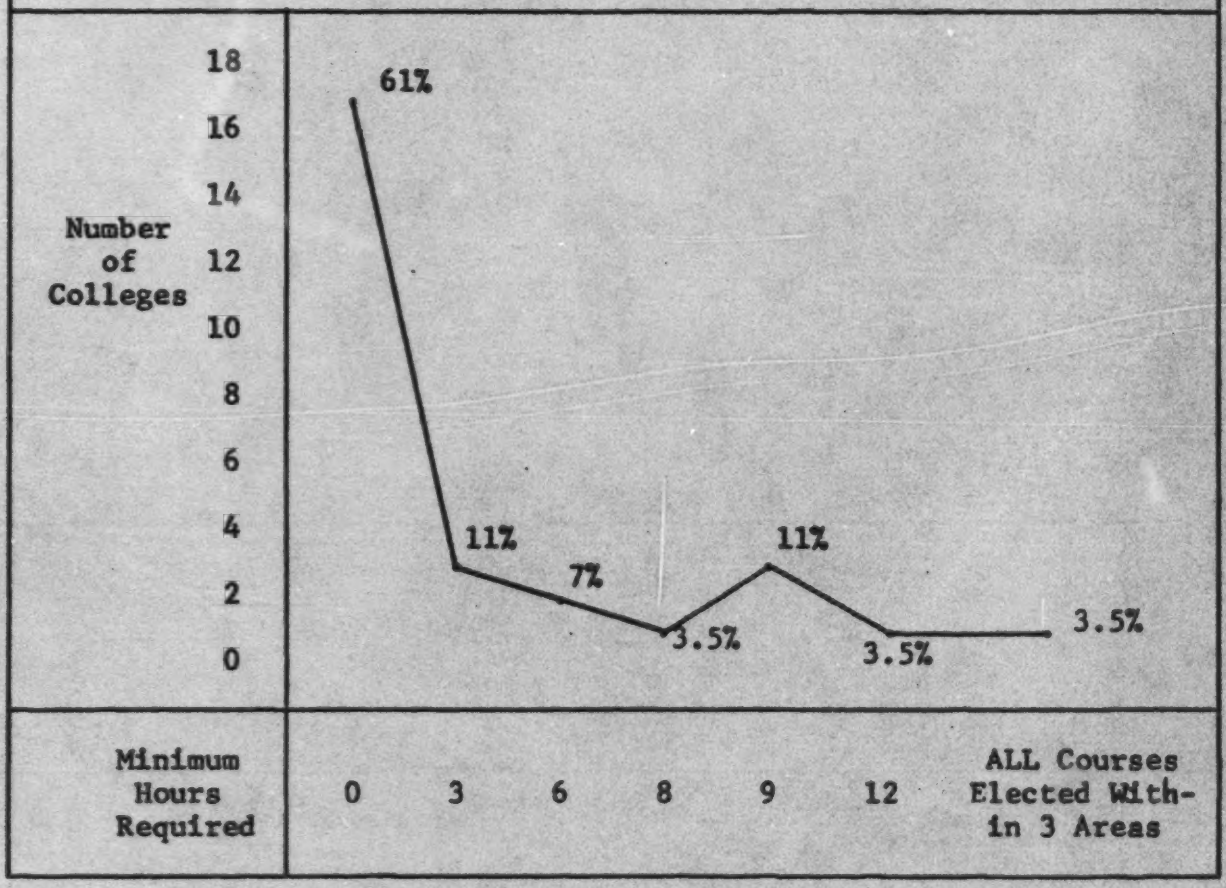
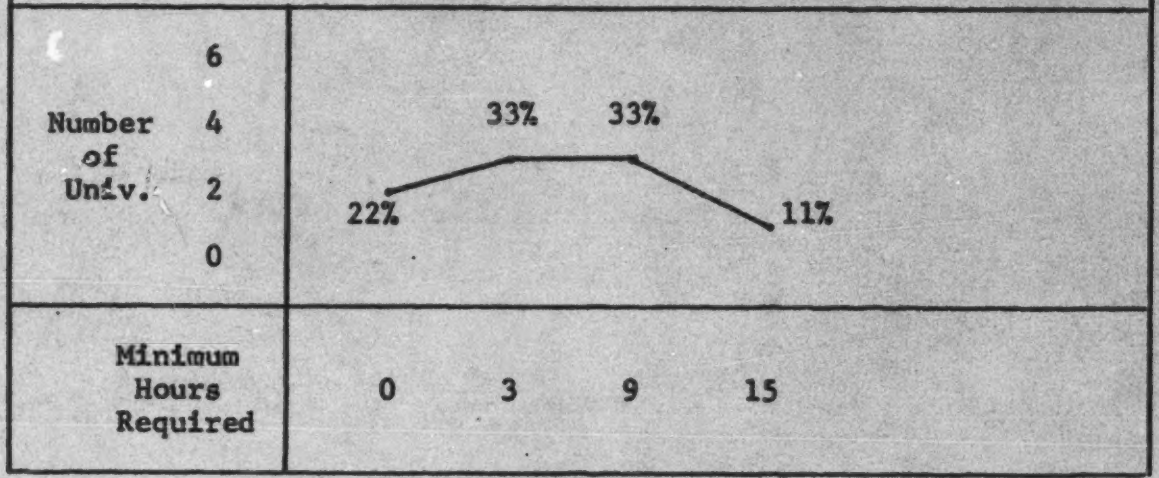


Figure 16 on the following page graphically presents this information for state universities in Florida.

FIGURE 16

FREE ELECTIVES PERMITTED IN
MINIMUM GENERAL EDUCATION REQUIREMENTS BY
STATE UNIVERSITIES IN FLORIDA



DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Discussion and Implications

The data from this comparative study was analyzed and discussed in terms of the following: (1) minimum semester hours required for general education certification by community colleges, by state universities, and by total institutions in Florida; (2) minimum semester hours required in communications; (3) minimum semester hours required in humanities; (4) minimum semester hours required in social sciences; (5) minimum semester hours required in science; (6) minimum semester hours required in mathematics; (7) hours required in "other" areas; and (8) hours permitted as flexible, "free electives" within the five academic areas.

Each of the above is discussed below.

(1) Minimum Semester Credit Hours Required for General Education Public Community Colleges (N=28): As shown in Table 1, page 29, 54 percent (N=15) of Florida's public community colleges require 36 semester hours of credit for general education certification -- the exact minimum mandated by the state's articulation agreement.

Twenty-two community colleges (78.5 percent) require 38 semester credit hours or less.

One college requires between 36-39 hours.

In comparison, CFCC is one of two colleges (7 percent) which requires 39 semester credit hours for general education. Only one college (Lake City) requires more (45 hours).

It is obvious, therefore, that CFCC is more demanding in the minimum semester credit hours it requires for general education than the majority (78.5 percent) of its 27 community college counterparts, despite the fact the articulation agreement requires only 36 hours.

State Universities (N=9): As shown in Table 1, page 29, 56 percent (N=5) of Florida's state universities expect 36 semester credit hours to meet their general education requirements.

Six universities (67 percent) require less than CFCC's 39 semester hours.

Three universities (33 percent) require more than 39 hours.

Again, in comparison, CFCC is more demanding in its minimum semester hour requirement for general education than the majority (67 percent) of the state universities to which many of its AA degree students transfer.

(2) Minimum Semester Hours Required in Communications Area for General Education:

Public Community Colleges (N=28): As shown in Table 2, page 32, 64 percent (N=18) of Florida's public community colleges

require six semester hours in the communications area for general education certification.

CFCC, however, is one of seven colleges (25 percent) which requires a minimum of nine semester credit hours in this area.

Again, CFCC is more demanding than the majority of its community counterparts.

State Universities (N=9): As shown in Table 2, page 32, six state universities (67 percent) require six semester credit hours in the communications area.

One university (11 percent) requires the equivalent of seven semester hours.

None of the state universities requires nine hours as does CFCC. One university requires only five semester hours in this area and one allows flexibility, dependent upon a student's options within the "communications-humanities" area.

Once again, CFCC is much more demanding in its communications area requirements than the great majority of universities to which many of its AA degree students subsequently transfer. All of the nine state universities require less semester hours in this area than does CFCC.

All Institutions (N=37): Table 2, page 32, also shows that of the total 37 state-supported institutions in Florida, 68 percent require less credit hours in communications than does CFCC.

(3) Minimum Semester Credit Hours Required in Humanities Area for General Education:

Public Community Colleges (N=28): As shown in Table 3, page 35, 50 percent of the public community colleges requires only six semester credit hours in the humanities area for general education.

Sixteen colleges (57 percent) require less than the nine hours required by CFCC.

Seven colleges (25 percent) -- including CFCC -- require nine credit hours.

Two colleges (7 percent) have options -- one, between 6-9 credits, and one between 8-9 credits.

Once again CFCC is more demanding than the majority of its college counterparts in its general education requirements in the area of humanities.

State Universities (N=9): As shown in Table 3, page 35, 33 percent (N-3) of Florida's state universities requires only six credit hours in humanities.

Seven universities (77 percent) require less than the nine credit hours required by CFCC.

One university (11 percent) requires more than CFCC (12 credits) and one has flexibility, due to a student's option in its "communications-humanities" area.

Again CFCC is more demanding in its humanities requirements than the majority (77 percent) of the universities to which

many of its AA degree students transfer.

(Fifty-nine percent of all public institutions in Florida requires less than the nine hours required by CFCC.)

(4) Minimum Semester Hours Required in Social Sciences Area for General Education:

Public Community Colleges (N=28): As shown in Table 4, page 38, 36 percent of Florida's public community colleges requires only six semester hours in the social sciences area for general education.

Nine colleges -- including CFCC -- (46 percent) require nine semester hours in this area.

Two colleges (7 percent) require 12 credits.

Of the three academic areas discussed thus far, the social sciences area's majority (46 percent) is as demanding as CFCC's requirement. Fifty-three percent (N=15) requires nine or more hours.

Ten colleges (36 percent) are less demanding than CFCC.

State Universities (N=9): As shown in Table 4, six state universities (66 percent) require less than the nine credits required by CFCC.

Three universities (33 percent) require more than nine credits.

Again, CFCC is more demanding in its social science requirements than the majority (66 percent) of the state universities to which many of its AA degree students transfer.

(5) Minimum Semester Hours Required in Science Area for General Education:

Public Community Colleges (N=28): As shown in Table 5, page 41, 32 percent of the state's public community colleges (N=9) requires six semester hours of science for general education.

Forty-six percent (N=13) requires less than the nine hours required by CFCC.

Six colleges (21 percent) require nine hours as does CFCC.

Five colleges (18 percent) require more than nine credit hours.

Again, CFCC's science requirement is more demanding than the majority (46 percent) of its public community college counterparts.

State Universities (N=9): As shown in Table 5, 33 percent (N=3) of Florida's state universities requires only six semester hours in science for general education.

Forty-four percent (N=4) of these universities requires less than the nine hours imposed by CFCC.

Two universities (22 percent) require the nine hours expected by CFCC.

One university (11 percent) requires more science credits than does CFCC.

One university (11 percent) offers flexibility in that a student has options within its "mathematics-science" area.

Once again, CFCC is more demanding in its general education science area requirements than the majority (44 percent) of the universities to which many of its AA degree students transfer.

(6) Minimum Semester Hours Required in Mathematics Area for General Education:

Public Community Colleges (N=28): As shown in Table 6, page 44, the majority (82 percent) of public community colleges requires only three semester hours of credit in mathematics, as does CFCC.

State Universities (N=9): Table 6 shows that the majority (55 percent) of Florida's state universities requires three semester hours in mathematics, as does CFCC.

(7) Semester Credit Hours Required in "Other Courses" for General Education:

As shown in Table 7, page 47, the majority of public community colleges (75 percent) and state universities (78 percent) requires no additional courses beyond those required in the preceding five academic areas. CFCC requires no other courses and is, therefore, included in this majority.

(8) "Free Electives" Permitted in An Institution's Minimum Semester Hours Required for General Education:

Public Community Colleges (N=28): As shown in Table 8, page 50, 61 percent of Florida's community colleges have no provision for flexibility in one's meeting general education requirements. CFCC is included in this majority. (It should be remembered, however, that 78.5 percent of these community colleges require less total hours than CFCC to meet general education requirements. This in itself implies a degree of "flexibility" that is not available at CFCC.)

It was interesting that one community college (Hillsborough -- see Appendix A) is totally flexible in that its students choose 12 credits from each of three academic areas: communications-humanities, science-mathematics, and social science. Hillsborough, it should be noted, is the most recently-established public community college in Florida (Appendix A).

Also interesting was that ten other community colleges (36 percent) permit from 3 to 12 "free electives" within the

five academic areas (see Table 8), even though the majority of community colleges still does not.

It was also interesting that -- for the most part -- the establishment date of a college did not seem to play that large a role in this, as had been assumed when initiating the study. Two of the ten colleges which make provision for "free electives" are St. Petersburg Junior College and Palm Beach Junior College, established as private institutions in 1927 and 1933, respectively. Three colleges offering "free electives" were established in the late 1950s. The remainder were established in the 1960s. However, none of the eight colleges established between 1947-1957, including CFCC, make any provision for "free electives" within the five academic areas of general education.

State Universities (N-9): As shown in Table 8, 77 percent (N-7) of the state universities make provision for "free electives" within the five academic areas for general education.

Three (33 percent) permit three hours of such "free electives", three (33 percent) permit nine hours, and one (11 percent) permits 15 hours.

Two universities (22 percent) make no provision for "free electives" within the five academic areas.

CFCC, therefore, is far less flexible in permitting "free electives" than the majority (77 percent) of the state

universities in Florida to which many of its AA degree students subsequently transfer.

Summary

Considering all of the above, the following summary statements were made:

(1) As was assumed prior to this study, CFCC demands more credit hours for general education than the majority (78.5 percent) of public community colleges and the majority (67 percent) of the state universities in Florida.

(2) CFCC demands more credit hours than the majority of public community colleges in three of the five academic areas for general education: communications (64 percent requires less), humanities (57 percent requires less), and science (46 percent requires less).

(3) As was assumed earlier, CFCC demands more credit hours than the majority of state universities in four of the five academic areas for general education: communications (100 percent requires less), humanities (77 percent requires less), social science (66 percent requires less), and science (44 percent requires less).

(4) CFCC's minimum requirements in the social science area are the same as the majority (46 percent) of public community colleges.

(5) CFCC's minimum requirements in the mathematics area are the same as the majority (82 percent) of public community colleges and the majority (55 percent) of state universities.

(6) CFCC offers no flexibility insofar as permitting "free electives" within the five academic areas of general education compared to the majority (77 percent) of the state universities to which many of its AA degree students transfer.

CFCC is in the majority (61 percent) of public community colleges in making no provision for such "free electives", although 36 percent permits from 3 to 12 hours. One community college, Hillsborough, provides a totally elective approach by requiring 12 credits in each of three academic areas: communications-humanities, science-mathematics, and social science.

(7) Although originally established to facilitate student transfer into four year institutions (primarily state universities in Florida), the CFCC general education policy is far more demanding and inflexible than the policies of these state universities.

(8) Insofar as the articulation agreement permits, the majority of public community colleges and state universities in Florida have general education policies closer to Thornton's ideal situation than does CFCC. (Thornton believes that general education policies should require no more than

one-third of a junior college student's time (Thornton, 1966). One-third of the minimum 64 semester hours required for an AA degree in Florida would be approximately 21 hours.)

Recommendations

Considering the foregoing discussion and implications developed from this comparative study's data, the following recommendations were made:

(1) The CFCC administration should require its Academic Affairs Committee to review its general education policy as compared with those of other public community colleges and state universities in Florida. The ultimate purpose of this review should be to revise CFCC's general education policy to facilitate better the academic needs and growth of CFCC students.

(2) In revising CFCC's policy, the Academic Affairs Committee should strongly consider reducing the minimum hours required for general education from the present 39 hours to 36 hours. In so doing, it not only would satisfy the requirement mandated by the articulation agreement, but also would parallel policies of the majority of public community colleges and state universities in Florida. This lower minimum would also be closer to Thornton's ideal of no more than one-third of a student's program being taken up by general education requirements (Thornton, 1966).

(3) The Academic Affairs Committee should consider keeping its three-credit mathematics requirement but reducing its requirements in communications, humanities, social science, and science from nine credits each to six credits each, for a total of 27 hours. The remaining nine hours could then be "free electives" within the five academic areas. This would facilitate students in meeting not only their general education requirements but also their major program requirements. Such a change in requirements would parallel policies of the majority of public community colleges and state universities in Florida. It would also permit "free electives" within the five academic areas as permitted by the majority of state universities and 36 percent of public community colleges in Florida.

APPENDIX

APPENDIX A

Minimum Hours Required to Complete General Education Requirements by Community Colleges in Florida (Excluding Physical Education*)

COMMUNITY COLLEGE	Date Est.	GENERAL EDUCATION ACADEMIC AREAS: Comm.	Hum.	Social Sci.	Science	Math.	Other Req.	Free Elect.	Min. Hrs. Required
St. Peters-burg	1927	6	6	6	9	6	--	3	36
Palm Beach	1933	6	6	6	7	3	--	8	36
Lake City	1947	9	9	9	10	3	8	--	45
Chipola	1947	------NO SPECIFIC STATEMENT MADE IN COLLEGE CATALOG ----------							
Pensacola	1947	6 ("1 Yr")	6	6 ("1 Yr")	12 ("1 Yr. Bio & Phys")	3	--	--	36**
N. Florida	1953	9	9	9	6	3	--	--	36*
CENTRAL FLA.	1957	9	9	9	9	3	--	--	39
Gulf Coast	1957	6	6	12	10	3	1	--	38*
Manatee	1957	9	9	9	6	3	--	--	36
Daytona Bch.	1958	6	6-9	6	9	3	6 (Pers.Dv.)	--	36-39

--continued--

St. Johns	1958	6	8-9	9	8	3	--	3	37-38*
Broward	1959	6	6	6	6	3	--	9	36*
Indian Rvr.	1959	6	8	9 (3 Plus 6 in Hist)	6	3	4 (PE)	--	36**
Miami-Dade	1959	6	6	6	(6 cr. from Sci/Math)		--	12	36*
Brevard	1960	9	6	9 (6 Plus 3 Beh.Sci.)	10	3	--	--	37*
Lake-Sumter	1961	-----NO SPECIFIC HOURS LISTED IN CATALOG--GENERAL EDUCATION VARIES AS DISTRIBUTED OVER 5 AREAS BY TRANSFER PROGRAM REQUIREMENTS-----							36
Edison	1961	9	6	12	8	3	--	--	38*
Fla.Jr.C.	1963	6	6	6	6	3	--	9	36
Fla. Keys	1963	6	6	6	6	3	--	9	36
Okaloosa-Walton	1963	6	6	6	12	3	4 (PE)	--	37**
Polk	1964	6	6	9	6	3	--	6	36
Santa Fe	1965	9	9	9	9	3	--	--	39
Tallahassee	1965	6	6	9	6	3	6 (Pers.Dev.)	--	36
Seminole	1965	6	7	9	9	3	--	3	37*
So. Fla.	1965	9	9	9	7	3	--	--	37

--continued--

Valencia	1967	6	9	6	6	3	--	6	36
Pasco-Hernando	1967	6	6	9	9	3	3 (Beh.Sci.)		36
Hillsborough	1968	-----NO SPECIFIC COURSES REQUIRED----- Students required to take 12 credits each in three academic groups: (1) communications-humanities, (2) science-math, and (3) social science-----							36
TOTALS:		174***	162#	201***	192##	75##	--	68***	923***
$\bar{X}$:		7	7	8	8	3	--	3	37

*These colleges require 2-4 credits in Physical Education in addition to general education requirements.

**These colleges require credits in Physical Education as part of the minimum credits required for general education.

***Total does not include three community colleges which are not specific in their catalogs as to how many credits required for communications, social sciences, and total minimum hours.

#Total does not include five colleges due to no specific hours stated in humanities or due to options available between areas.

Total does not include four colleges due to no specific hours stated in science and mathematics or due to options available.

APPENDIX B

Minimum Hours Required to Complete General Education Requirements by State Universities in Florida (Exluding Physical Education) (Converted from Quarter Hours and Rounded Off)

UNIVERSITY	GENERAL EDUCATION ACADEMIC AREAS							
	Comm.	Hum.	Social Sci.	Science	Math.	Other Requ.	Free Elec.	Min. Hrs. Required
Univ. of Florida	6	8	6	10	3	4 (Beh.Sc)	--	37*
Florida State	6	8	14 (Hist. & Soc.Sci.)	9	3	--	--	40
South Florida	5	5	5	5	5	--	15	36
Florida Atlantic	6	6	6	6	3	--	9	36
West Florida	---11 from Comm./Hum.--		11	---11 from Math/Sci.--		--	3	36
North Florida	6	6	6	6	3	--	9	36
Florida Tech.	7	7	8	7	5	--	2	36
Florida A & M	6	12	12	9	6	12 (F.Lang.)	-	57
Florida International	6	6	6	6	3	--	9	36
TOTALS:	48**	58**	74	58**	31**	--	47	354
X:	6	7	8	7	4	--	5	39

*Requires courses in Physical Education in addition to General Education

**These totals do not include University of West Florida, due to options.

BIBLIOGRAPHY

Books and Periodicals

Brevard Community College, 1975-77 Catalog. Cocoa, Florida: Brevard Community College, 1975.

Broward Community College, 1975-76 Catalog. Ft. Lauderdale, Florida: Broward Community College, 1975.

Central Florida Community College, College Catalog, 1971-72. Ocala, Florida: Central Florida Community College, 1971.

_____ College Catalog, 1976-77. Ocala, Florida: Central Florida Community College, 1976.

Central Florida Junior College, College Catalog, 1963. Ocala, Florida: Central Florida Junior College, 1963.

_____ College Catalog, 1965. Ocala, Florida: Central Florida Junior College, 1965.

_____ College Catalog, 1967-68. Ocala, Florida: Central Florida Junior College, 1967.

Chipola Junior College, College Catalog, 1976-77. Marianna, Florida: Chipola Junior College, 1976.

Daytona Beach Community College, General Catalog, 1976-77. Daytona Beach, Florida: Daytona Beach Community College, 1976.

Edison Community College, General Catalog, 1976-78. Ft. Myers, Florida: Edison Community College, 1976.

Florida A & M University, Catalog, 1976-77. Tallahassee, Florida: Florida A & M University, 1976.

Florida Atlantic University, Catalog, 1976-77. Boca Raton, Florida: Florida Atlantic University, 1976.

Florida International University, The Catalog. Miami, Florida: Florida International University, 1976.

Florida Junior College at Jacksonville, 1976-77 Catalog. Jacksonville, Florida: Florida Junior College at Jacksonville, 1976.

Florida Keys Community College, 1976-77 Catalog. Key West, Florida: Florida Keys Community College, 1976.

Florida State University, Bulletin. Tallahassee, Florida: Florida State University, 1976.

Florida Technological University, Catalog. Orlando, Florida: Florida Technological University, 1976.

Friesen, Chuck, "An Analysis of General Education Mathematics Programs in Two-Year Colleges." A research report, September, 1974. ERIC ED094841.

Gordon, Oakley J., "The Innovative Curriculum: Perspectives." Paper presented at the 25th National Conference of the American Association for Higher Education, Washington, D.C.

Gulf Coast Community College, Catalog, 1976-77. Panama City, Florida: Gulf Coast Community College, 1976.

Hillsborough Community College, Bulletin, 1976-77. Tampa, Florida: Hillsborough Community College, 1976.

Indian River Community College, Catalog, 1976-77. Ft. Pierce, Florida: Indian River Community College, 1976.

Kumar, K.S.P., "A Program in Social Science for Engineering Students." Paper presented at the annual meeting of the American Association for Engineering Education, Colorado State University, Ft. Collins, Colorado, June, 1975. ERIC ED 118388.

Lake City Community College, Catalog, 1975-77. Lake City, Florida: Lake City Community College, 1975.

Lake-Sumter Community College, General Catalog, 1976-77. Leesburg, Florida: Lake-Sumter Community College, 1976.

Manatee Junior College, Catalog of Manatee Junior College. Bradenton, Florida: Manatee Junior College, 1976.

McCluskey, E. Scott, and Worley, William E., "A Study of the Discipline-Based Education vs. Liberal Education in the Department of Social Sciences." A Nova University Practicum, Nova University, Ft. Lauderdale, Florida, June 14, 1974.

Miami-Dade Community College, 1976-77 Catalog. Miami, Florida: Miami-Dade Community College, 1976.

North Florida Community College, North Florida Community College General Catalog. Madison, Florida: North Florida Community College, 1976.

Okaloosa-Walton Junior College, Catalog, 1976-77. Niceville, Florida: Okaloosa-Walton Junior College, 1976.

Palm Beach Junior College, 1976-77 Catalog. Lake Worth, Florida: Palm Beach Junior College, 1976.

Pasco-Hernando Community College, 1976-77 Catalog. Dade City, Florida: Pasco-Hernando Community College, 1976.

Pensacola Junior College, Pensacola Junior College Catalog. Pensacola, Florida: Pensacola Junior College, 1976.

Polk Community College, Catalog, 1976-77. Winter Haven, Florida: Polk Community College, 1976.

Reichman, Louis, "General Education and Relevancy for California Higher Education's Newest Student: Is There a Compatability?" Community College Social Science Quarterly, February, 1973.

St. Johns River Junior College, General Catalog, 1976-77. Palatka, Florida: St. Johns River Junior College, 1976.

St. Petersburg Junior College, 1976-77 Bulletin. St. Petersburg, Florida: St. Petersburg Junior College, 1976.

Santa Fe Community College, Catalog, 1976-77. Gainesville, Florida: Santa Fe Community College, 1976.

Seminole Community College, General Catalog. Sanford, Florida: Seminole Community College, 1976.

Shandloff, Lucille G., "Students Marching to Their Own Drummer --the Associate in General Studies Program." Community College Review, February, 1974.

South Florida Junior College, Catalog, 1976-77. Avon Park, Florida: South Florida Junior College, 1976.

State of Florida. Articulation Agreement Between the State Universities and Public Community Colleges. Tallahassee, Florida, 1971.

Suddarth, Betty M., "An Investigation of General Education Requirements in College Curricula." Research in Higher Education, 1975.

Tallahassee Community College, Catalog. Tallahassee, Florida: Tallahassee Community College, 1976.

Thornton, James W., Jr., The Community Junior College, Second Edition. New York: John Wiley and Sons, Inc., 1966.

University of Florida, The University Record: Undergraduate Catalog. Gainesville, Florida: The University of Florida, 1976.

University of North Florida, Catalog. Jacksonville, Florida: University of North Florida, 1976.

University of South Florida, USF Bulletin. Tampa, Florida: University of South Florida, 1976.

University of West Florida, Catalog. Pensacola, Florida: University of West Florida, 1976.

Valencia Community College, Valencia Community College Catalog 1976-77. Orlando, Florida: Valencia Community College, 1976.

Unpublished Material

Central Florida Junior College, Information Brochure of the Central Florida Junior College. Ocala, Florida: Central Florida Junior College, 1958.

_____ President's Memorandum for Faculty, March 11, 1963. Ocala, Florida: Central Florida Junior College, 1963.

Central Florida Community College, Minutes of the Academic Affairs Committee, July 6, 1971.

Other Sources

Central Florida Community College. Personal interviews with Counselors Karen Williams and T. Joseph Wooten and with Director of Counseling George M. Hitchcock, Jr., September, 1976.

_____ Interview with Registrar Casius Pealer, 1976.

UNIVERSITY OF CALIF.
LOS ANGELES
JUN 4 1977
CLEARINGHOUSE FOR
JUNIOR COLLEGES